



*Hanc decorata Dea, quot quot regnat in hortis,  
Floribus e vestris suprague infrague tabellam:  
Tui dedit arboribus flores, et edilibus herbis,  
Et seminata est tanto Pomona colono.* Sententia 9. Perennis

THE  
**Compleat Gard'ner;**  
 OR,  
 Directions for CULTIVATING  
 AND  
 Right ORDERING  
 OF  
**Fruit-GARDENS**  
 AND  
**Kitchen-Gardens;**  
 With Divers REFLECTIONS  
 On several Parts  
 OF  
**HUSBANDRY.**

In Six BOOKS.

By the Famous Mon<sup>r</sup>. *De La Quintinye*,  
 Chief director of all the **GARDENS** of the *French-King*.

To which is added  
 His Treatise of **ORANGE-TREES**, with  
 the Raifing of **MELONS**, omitted in the  
*French Editions*.

Made English by *John Evelyn* Esquire,  
 Illustrated with Copper Plates.

**LONDON,**  
 Printed for *Matthew Gillyflower*, at the *Spread Eagle* in  
*Westminster-Hall*, and *James Partridge*, at the *Post-*  
*house* at *Charing-Crofs*, M DC XC III.

To the Right Honourable

**H E N R Y**

Lord Capell, Baron Capell of Tewksbury,  
one of the Lords of their Majesties  
moſt Honourable Privy-Council.

My LORD,

**I**F ever Book deriv'd Honour from the  
Person to whom it was Dedicated,  
Your Lordſhip's Name alone in the  
Front of this Work would ſecure its Reputa-  
tion, and juſtify the Preſumption of our  
Addreſs. Your Lordſhip's particular  
Knowledge of the Authour, and Penetra-  
tion into the Subject he Treats off (and  
all the Secrets of Horticulture) gives  
your Lordſhip double Title to this Ver-  
ſion: But as it was from your Lordſhip's  
Approbation, that this (no eaſie Work)  
was undertaken by Us; So it is under the  
ſame Influence it hopes to Live and Prof-  
per: In this Confidence we Humbly Offer  
it, and our Selves to your Lordſhip's Pro-  
tection, as

Your Lordſhips moſt Obedient Servants,

Matthew Gillyflower.

James Partridge.

# T H E P R E F A C E.

**B**Efore I enter upon the matter of the *Subject* I have undertaken, I think my Self obliged to advertise you, That *Gardening* is not among us *Moderns*, what it was in the first *Ages* of the *World*. In those early times 'tis probable, they knew no other *Gardens* than those of *Fruits* and *Legumes*, which we now call *Fruit* and *Kitchen-Gardens*; whereas in our Days, there are several other sorts besides them, some being for *Parterres* and *Flowers*, some for *Nurseries*, some only for plain *Gardens* for *Common Use*, and others for *Rare* and *Medicinal Plants*, &c.

So great a multiplicity of different sorts of *Gardens*, affording no less diversity of employments for *Gard'ners*, in process of time, introduced several *Classes* of them; some being simply called *Gard'ners*, others taking the quality of *Florists*, and others well deserving the Title of *Botanists*, and others being named, \* *Market Gard'ners*, besides those that apply themselves only to the raising and maintaining of *Nurseries*, for which there wants yet a particular Term, unless we should call them *Nursery Gard'ners*.

In the explication of the *Original*, and establishment of which several *Ranks* of *Gard'ners*, I think it will not be impertinent to bestow a few Lines, before we pass further.

My *Opinion* in this Matter, is, That the *First Man* having been Created in a *Garden*, and received Orders after his Transgression, to till the *Earth*, and to get his Maintenance out of it by the *Sweat* of his *Brows*. It follows from thence, that one of the chiefest Employments, both of *Himself* and his first *Descendants*, was to apply themselves to the culture of *Fruits* and *Legumes*; that being then the *Function* which alone supplied *Humane Kind*, with all the necessaries of *Life*. And indeed the *Ground* so tilled, did it not consist of true *Fruit* and *Kitchen-Gardens*? And consequently, because in those first *Ages*, no other *Gardens* were known but such, there could be no other *Gard'ners* neither, but those which govern'd them, who may on that account, be justly esteem'd the first of the whole *Order* of *Gard'ners*. For the *Patriarchs* properly speaking, were those first *Fruit* and *Kitchen-Gard'ners*, and continued to perform that *Function*, till being diverted by their Application to the *Invention* of *Arts*, they were oblig'd to make use of the Service of some principal *Domestick* to help them in their *Gardens*, who disdain'd not to take the Name of that we commonly understand by the Term of *Gard'ner*.

But in the *Ages* following, as soon as Men thought they had made a sufficient provision for their Necessities, and there begun to be establish'd among them, some distinction of Degrees and Fortunes; it hapned that the Pleasures of the *Sight* and *Smell*, inspir'd some Persons with the Curiosity to gratifie them with *Flowers* agreeable to one or both of those *Senses*, and accordingly, they begun to gather together some of all those *Beautiful Plants* which they observ'd so curiously to enamel, and so admirably to perfume the Fields, where they were before confusedly dispersed.

Thus was the *Culture* of *Flowers* begun indeed by such *Gard'ners* as those we just now mentioned, because there were no others that could do it; but when Men had a mind to have so great a number of them, as is now practis'd by way of Ornament, to the palaces of *Great Persons*, they begun to make particular *Gardens* of them which they call'd by a name

### Flower Gardeners or Florists.

I might tell you here by the way, that in those times, *Orange* and *Limon-trees*, were perhaps look'd upon as Trees only for *Flowers*, juſt as the *Myrtles*, *Jefſamins*, and *Laurullinus-Trees*, &c. are now, the delicacy of Mens palates being not arriv'd to that degree of *Luxury*, to ſeck after ſo many ſorts of Reliſhes, Sawces, and ſeaſonings as now; ſo that 'tis very probable, that *Limon* and *Orange-trees* might then belong only to the *Province of the Floriſts*.

But yet methinks it may be more probably affirmed, that in those early times, those Trees were not distinguished from *Fruit-trees*, since they are truly so; and therefore I am apt to believe, they were cultivated by the first *Gard'ners* only for their *Fruit*, and that the rather, because the first *Culture* of the *Earth* being begun in hot and temperate Countries; the slavery and trouble of *Boxes*, and *Conservatories*, which in our *Climates* they cannot be without, were there of no use at all. It was therefore the rigour of the *Winter* Season in cooler Regions that gave occasion to those Inventions for the preserving of those plants that were of too tender a Constitution to endure any great Cold, and then the *Gard'ners* of the second Class, who otherwise were not over-much taken up with the *Culture* of their *Flowers*, begun to be charged with the care of *Orange* and *Limon-trees*.

And further, the affectation of Men to gratify the Pleasure of their Eyes, inciting them to push on things to more and more Perfection; there came first into the minds of Noble Persons, some conceits of Ranging those *Flowers* with a little more agreeableness and *Symmetry* than was practised by the first *Curioss*, which gave the first beginning to *Parterres*, or *Flower-plots* among *Florists*, the first of which, in all probability, were but \* cut pieces shaped after but a plain and gross manner. But afterwards there were some made of another fashion, called *Embroidery Fashion*, which were better contrived, and more delightful than the other, with which two sorts, the *World* contented themselves for several *Ages*, so that *Gardens* were not accompanied with any other Beauties than those, till in these last times, *Curiosity*, *Good Judgment*, and *Fancy*, and *Magnificence* it self being grown by little and little, to an extraordinary height, our *Age* which excels in all that *Humane* industry is able to invent, has given in particular, by the ingenious skill of the famous Mr. *Le Nôtre*, the last perfection to this part of *Gardening*, which appears by so many *Canals*, *Water-Works*, *Cafades*, *Spouting Fountains*, *Labyrinths*, *Bowling Greens*, *Terraces*, &c. Ornaments indeed that are new, but such as in earnest, do wonderfully set off the natural Beauty of a *Garden*.

Having spoken largely enough of the first and second *Clas*s of *Gard'ners*, I proceed to the third, which is of those which meddle neither with *Fruits* nor *Flowers*, but only with *Kitchen-plants*, whose Original might come from some of our first *Gard'ners*, who being seated near some very populous *Cities*, thought good to plant some particular *Gardens* of *Herbs*, in hopes they might make a considerable gain of them in the publick Markets, and because Grounds that were a little fat and moist seemed to them most proper, as well for the managing the *Culture*, as promoting the abundance, and bigness, and height of every Plant, they chose low places to make those kinds of *Gardens* in; nay, and perhaps such places had been for-

Market or  
Marsh or Kitchen-  
gardens.

formerly perfect Fenns or Marfhes, which were afterwards drained and laid dry, so that in Vulgar Speech, those sorts of *Gard'ners* were termed *Marfb Gard'ners*, which was as much as to say, *Gard'ners* of dried Marfhes or Fenns. And the vent of those *Herbs*, proving by the success so profitable to those that made it, stirred up Mens Industry to multiply that sort of *Gardens*, even in very dry and sandy places, and to supply with their frequent Waterings, and improvements with plenty of Dung, the defects of goodness in the Ground.

This Account which I here give, establishes clearly three *Classes* of *Gard'ners* very different one from the other, without mentioning the other two *Classes*, viz. that of those *Gard'ners* that mind only *Nurseries*, and the other of those that confine themselves to the *Culture* of *Rare* and *Medicinal Plants*; and yet 'tis certain, there are some very able and knowing Persons, that make it their *Pleasure* and *Business* too, to cultivate both of them, and to perform it with *Success* and *Reputation*.

But as for my own inclination, it was always fixed to that sort of Gardening that was known in the infancy of the *World*, and practis'd by our first Parents, so that for a long time, I have particularly apply'd my self to the Culture of *Fruit*, and *Kitchen Gardens*. And by this Application, having not only discover'd a great number of Beauties, but likewise a great many Faults that are committed in that sort of Gardening, I cannot but think my self oblig'd before all things, to describe them carefully, that they may be avoided.

I find then first, that commonly these sorts of *Gardens* are not only unfurnish'd with what they should, and might easily have for each season of the Year, whether *Fruits* or *Legumes*, but that besides, they are ill contrived in the *Disposition* and *Ranking* of the things contained in them.

Secondly, That there appears but little skill and capacity in most of the *Gard'ners* that cultivate them, and as little understanding in the *Masters* that employ them, to know how to direct them better; so that usually 'tis the fault both of the *Owners*, and their *Gard'ners* too, that those sorts of *Gardens* come short of yielding either that *Pleasure* or *Profit* they might otherwise do, and which was expected from them.

I will do what I can, to remedy those great Failings, as well out of Obedience to the Orders I have received to that effect, as out of an inclination to pleasure others, an inclination which I dare affirm natural to me, and especially in affairs of *Gardening*, which of it \*self inspires a Man with the obliging humour of doing good Offices. For which purpose I undertook to compose and publish this Treatise, as thinking it might effectually be a useful work, if as I believe, I may, and as I propose to my self to do, I shall be so successful to give any assistance to ingenious Gentlemen to order their *Gardens* with a more advantageous Conduct, and at the same time direct their *Gard'ners* to execute their *Master's* Intentions better than hitherto, and consequently by the means of a well managed *Culture*, how to reap those advantages which the *Earth* bestows only upon the Laborious and Industrious. Besides which, three other principal reasons have obliged me to write.

than to declare to such as have a mind to know them, the means they used to succeed in it, whereas commonly the humbler joy  
*Artists* is to make a *Mystery* of all things, and dissingenuously to keep to themselves alone, the new *Discoveries* they have made in their Art.

The first was the little instruction, I observed was to be gathered from so many Books, which have been made upon this Subject in all *Ages*, and in all *Languages*. 'Tis true, we have a great deal of Obligation, not only to some *ancient* Authors, that have so solidly treated of *general Agriculture*, but likewise to some *modern* Writers which have imparted

**The Nursery Gardener**  
Heronville

1. Agriculture is an  
2. Art truly noble,  
3. and capable to  
4. ennoble its wor-  
5. thy professors,  
6. most of which  
7. are so generous  
8. and communica-  
9. tive, that they  
10. take an extreme  
11. pleasure in let-  
12. ting the whole  
13. World see their  
14. Works, and  
15. when they hap-  
16. pen to make any  
17. prosperous expe-  
18. riment, they have

\* *Columella*, *Cato*,  
*Varre*, *Trochophra-*  
*stus*, *Xenophan*, *Geo-*  
*pontia*.

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\* Under the Title of *Memoirs of the Curate of Enonville.*

to the publick, their particular improvements in this Art. But we are most of all obliged to some \* *Persons of Eminent Quality*, who under, the title of the *Memoirs or Observations of the Famous Curate of Enonville*, have so politely written of the *Culture of Fruit-trees*. And truly I must confess, it was from them I had the first views of the principal Ornaments of our *Gardens*, as well as those of the Pleasure and Advantage we reap from such of them as are well managed. But then to balance these few good Authors, what a multitude of other Books have we to exclaim against, with which we are overwhelmed? The most part of which, I may without injustice affirm, are not to be looked upon otherwise than as troublesome *Translations*, and nauseous *Repetitions* of several old *Maxims*, which I hope, I shall carefully mark out to you, and demonstrate at the same time to be for the most part *faulty*, or at least very *insignificant*.

The second Reason that obliges me to write, is the assurance I have, that I am the Cause of peoples acting erroneously in many *Gardens*, though it be the most innocently in the World on my side, which proceeds from the inconsiderate conduct of certain Persons that being prejudiced with too favourable a conceit of my Abilities in this kind, when they see what I do in our *Kitchen Gardens*, and to our *Fruit-trees*, are sometimes tempted blindly to imitate my *Practice*; but because they are ignorant of my *Principles*, and think it would reflect too much upon their Reputation, to stoop so low as to ask me them, they venture to guess at them themselves, thinking without doubt that nothing is so easy as to hit them right.

I cannot forbear telling them, and I desire them not to take it ill, that 'tis a very rare thing to guess right in almost any sort of matter whatsoever; and though it be true, that this of our *Art* is not at all difficult to understand when 'tis illustrated and made out with good Reasons, yet most commonly people are not very lucky in hitting upon them at a venture, without some instruction; for alas, by following their first imaginations, they often run the hazard of acting just the contrary to what I practise, and consequently to what they design, when they think of nothing but guessing.

For Example, in matter of Pruning, one Gentleman, because he observes some short Branches upon my Trees, says presently, he sees well enough, that my way of pruning is to cut short, and keeps to that. Another, because he has seen some long ones upon them, concludes as peremptorily on his Side, that my method is to cut long, and that he fully understands it. Lastly, a third, because he has once observed me at the same time, to cut some Branches short, and others long; if another time he returns and sees any Trees with a different Face from what he expected, presently accuses me of uncertainty in my *Principles*; nay, and takes the liberty to say, he sees much inconstancy in my pruning, and therefore, that I have no certain Rule to go by in that *Operation*, and thereupon as he fancies, makes the finest reflections in the World, in Order to take for the future a quite different way from mine.

The first being one of that sort of hasty Spirits, that think they can comprehend any thing at first sight, makes, as I may say, great Mistakes upon the Trees, whilst thinking to imitate my manner of pruning, he takes a Resolution to cut close in all occasions.

The second, with the like Intention, ruins in little time the Beauty of his Trees, by leaving those Branches long, which should be cut short.

And lastly, the third falls into such a perplexity, that he knows not which way to take.

These are the Gulfs into which the false Reasonings from bare Conjectures and probabilities lead and decoy Men. And therefore though I

should

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should do nothing else in this Book, but give an account of my Conduct, by explaining for Example, what sort of Branches I cut short, and what I leave long; what Trees I leave laden with more Branches, and which with fewer, &c. with the motives why I do so, I think it would be no small benefit to the Publick, that they who shall be thus informed of them, may not torment their Heads so much any more with guessing, nor consequently be so easily induced to venture upon erroneous Methods.

This done, if my Conduct be approved it will be imitated, at which I shall be extremely satisfied, because of the interest I have, that every one should be pleased; and if it be not liked, it will be condemned, and perhaps may incite some charitable censor to publish a better, at which I shall be no less pleased, because of the passionate desire I have to improve my self to more and more perfection in this matter.

In fine, the third and last reason that obliges me to write, is the hopes I have, that the reading of this Book will be advantageous in two other Respects, of which I think I ought to make some account.

The first is, That every one of my *Maxims* being fully understood in their whole extent, as I intend they should, and as they may be, by what I have written to explain them, will, if I mistake not, give some light to direct people to take better methods in Gardening. But if through Malice or Ignorance, any Person shall follow one part of any of my *Rules*, without observing the other, I am confident he will find himself very much deceived, and therefore do here sincerely advertise all concerned, to observe that Caution, that I may not be responsible for all the inconveniences they will infallibly fall into, as often as they shall scruple entirely to believe me.

The second is, because most of those unskilful *Gard'ners*, as have seen only with a cursory view what I do, or perhaps have only heard of it by the Relation of others, if they succeed ill, as it but too often happens, they presently have an excuse ready, and without scruple discharge themselves of their Faults, by throwing them on me; they make me the Author of all their mis-managements, thinking to Authorize by my Name what they cannot otherwise defend; they will needs have me to have brought in such and such a use, which never entered into my thoughts, and say they have done such and such things, purposely to imitate me, and to let the World see whether there be so much reason to imitate me, as is pretended. Against these Pleas, I shall now at least have an irrefragable justification in Writing, so that it being in no Man's power to pretend I have said any thing but what I have really said, I shall by this means prevent such imputations for the future, and perhaps \* save the poor innocent Trees from being so barbarously handled any more upon my account, which would not have failed to act their parts well, if they had been wisely ordered.

I hazard then to publish this Instruction for Gard'ning, principally with a design to pleasure ingenious Gentlemen, and also because I can no longer with Patience endure, that to the shame of our Times, and if I may be permitted that Expression, to the shame of all that close Application I have bestowed upon this *Art* for these many Years; it should be possible still with justice to say of ours, what *Columella* reproached to his Age, *quasi consanguinea* That though the knowledge of *Agriculture* be one of the most excellent Sciences, and the most akin to solid Wisdom of any, yet is it so unhappily neglected as to find but few Masters able to teach it, or Scholars desirous to learn it:

\* As it is a thing of great use, to work skilfully in Agriculture, so it is much more pernicious to do any thing in it ill, than to do nothing at all.  
Xenophon.  
Sila res rustica, que sua dei Jovis me proxima, et quasi consanguinea  
sepe mecum est, tam dilectior habet quam Alexander.  
Columella.

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I know well enough, that all Books of *Gard'ning* have usually begun with a Preface full of the praises given to it, and that consequently it may be thought, this ought to begin so too. But since I am far from presuming my self able to say any thing new, that may at all enhance the esteem which is due to *Gardens*, or to the *Art* that teaches their Construction, and therefore cannot but think it very impertinent to go about to persuade any one to study it; when I observe the most part of Men possess'd with a natural passion for so sweet and profitable an Occupation, I shall wave those Complements, and fall down-right upon the pursuit of my Design, which is to instruct, in case I can show my self really master enough of the *Art*, worthily to perform it.

This Treatise therefore, as I have said, is chiefly intended for two sorts of Persons. First, for those illustrious *Gard'ners* (for so it is, for want of more particular and significant Terms, I will hence forward stile the famous lovers of *Gard'ning*, of what *Quality* soever they be.) And next, the Ordinary *Gard'ners*, those, I mean, that are commonly known by the plain name of *Gard'ners*, whether they already exercise the Trade, or only desire to begin to learn it.

I will assist the first, that is, the illustrious *Gard'ners*, how to find and attain easily the true diversifications of *Gardens*. And the others I will endeavour to instruct, and render fit and capable, artfully to perform all the Duties of their Calling and *Quality*. My design appears very great, and very specious, and therefore must be managed with some Order. That which I purpose to follow, is this.

I will divide the Work into six parts, every one of which I shall make a particular Book.

I shall begin the first by proving as well as I can, that a man had better never have any *Fruit* or *Kitchen Gardens* at all, than not to be reasonably well instructed in the management of them; and at the same time I will shew, that 'tis very easy to acquire a general and sufficient Knowledge in it, there being nothing else needful to be done for that, but carefully to read, and order to be exactly observed, a little abridgment of the Rules of *Gard'ning*, which I have drawn up by way of *Aphorisms*, in the third Chapter of the first Book.

And afterwards in the same first Part, I will, if my Judgment deceive me not, give directions how to make a discreet choice of able *Gard'ners*, which I reckon to be one of the most important points to be lookt after in this matter. And lastly to prevent any doubts or perplexities, our Gentlemen *Candidates*, or young beginners in these *Curiosities* may fall into, for want of a right understanding of certain Terms of *Gardening*, which I shall use in this Treatise, I have added a little *Dictionary* of them at the end, which gives as full an explanation of them, as is necessary to make them intelligible to the meanest Readers.

In the second part, I shall first shew what *Qualities* are necessary to make any piece of Ground fit to be converted into a *Garden*, that may be both profitable and delightful. Next I shall direct what is to be done in order to the right preparation of those Grounds, that are naturally pretty good, and the melioration and improvement of those which are not so; and how to model any *Fruit* or *Kitchen Garden* whatsoever, great or little, regular or irregular, well or ill situated, as well for the most advantageous disposing of its *enclosure*, and well garnishing its *Walls*, as of the *Ground* in the middle, that the whole may be so well employed, that it may not only court our *Senses* with the Charms of *Neatness* and *Beauty*, but be rendred more easy and convenient to *Cultivate*, and so comfortable and good natur'd, as above all, to reward our Labours with a com-

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competent store not only of all sorts of *Legumes*, but particularly of choice, good and lovely *Fruits*. And lastly, I will lay down instructions how to cultivate *Fruit-Trees* throughout the whole Year, and how to recruit them with fresh *Amendments*, as often as they shall need it.

In the Third Part, I will endeavour to describe which are in my Opinion, the choicest sorts of *Fruits*, that Gentlemen may not only be thereupon induced to chuse none but them, but may be directed how to proportion the number of each of them in every *Garden*, and because 'tis not enough to know only in general, which are the principal sorts of *Fruits*, I shall also specify in particular which are the best in every Month, how long each sort of them usually last, and as near as can well be calculated, what quantity of *Fruit* each *Tree* may be expected to yield at its first beginning to bear, after three, four, five, or six years planting, when it is well ordered, that Gentlemen may take their measures accordingly, so as to be furnish'd with such a store of them, that may be sufficient to content the passion they may have for *Fruit*. I will likewise give Directions at the same time, how to assign each *Fruit-Tree* the place that is most proper and effectual to make it thrive and prosper. And, Secondly, how to chuse such well qualified *Stocks* of every sort of *Tree*, as may truly deserve a place in a *Garden*.

Thirdly, how to prepare them by trimming both their *Tops* and *Roots*, in order to plant them; and, Lastly, how to plant them well; all which are Observations so absolutely necessary, that without them, 'tis impossible not to commit very great errors.

In the fourth Part, I will treat of the *pruning* of *Trees* according to the method practis'd by my Self; and afterwards I will describe my way of *pinching* some of them, and of *disbudding* or *thinning* their *Leaves*, *nailing* them up, &c.

In the fifth Part, I will direct how to thin them of their *Fruit*, by plucking off as many as occasion shall require, where they grow too thick, for we are not to leave so many *Fruit* upon a *Tree*, as it had Blossoms, but have reason rather to be suspicious of those that blossom too much, the excess of their good Will, if I may so say, being to be reckon'd a great Fault, because it most certainly disables them from bringing their products to perfection.

I shall also give instructions when 'twill be proper to uncover such *Fruit* as we shall have left growing, in order to their attaining that beauty of colour, and accomplish'd goodness which are agreeable to their kind; as also, exactly when to gather both those which ripen on the *Tree*, and those which attain not their full ripeness there, but must be laid up to mellow in the House. *Allo*,

How to keep them as long as 'tis possible, for which purpose, I shall give all necessary Directions for the Building, Exposition, and Disposition of *Store-houses* for *Fruit*. And, Lastly, I shall direct how to know when any sort of *Fruit* is ripe, and when it may seasonably be served up to be eaten, whether it be such as will not keep, such as are all *Summer-Fruits*, or such as is laid up in the *Store-house* to be kept, of which *Classe*, are *Autumn* and *Winter-Fruits*.

In the same fifth part, I intend likewise to treat of some Diseases of *Trees* that may be cured, where I shall ingenuously declare at the same time, which are those against which I have been able yet to find no Remedy: *Allo* to restore those *Trees* to their former vigour which are fallen into a languishing Condition, for want of good *Culture*. And, Lastly, to lay down Instructions, how to distinguish those which are past recovery, that no Person may bear any further expence of time, or Pains or Money upon them,

The Substance of the third part.

The Substance of the fourth part.

Vitam bonum cum  
Antiqui Laudant  
bonum Bonum A-  
gricolam, bonumq;  
Civem produci-  
tenti, & amplissi-  
mi laudantium exi-  
stimatione.  
Says Cato, i. e.  
When the Anci-  
ents praised any  
good Man, they  
called him a good  
husbandman,  
and a good  
flow-man, think-  
ing that the high-  
est Compliment  
imaginable.

The Division of  
the following  
Work.  
The substance of  
the first part.

The substance of  
the second part.

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them, to no purpose. I likewise pretend in the same fifth part, to give all the insight that is needful for the management of *Nurseries* of all sorts of *Fruit-Trees*, as well in respect to the choice of *Stocks* most proper to receive *Grafts* of what kind soever, as to the *Grafting* them in such a manner, as may be most agreeable both to each sort of *Fruit* to be Grafted, and to each *Stock* to be Grafted on. I shall therefore also give my advice about the different ways of *Trellising* and *Nailing up Wall-Trees*.

Lastly, in the sixth part, I intend to treat of *Kitchen-Gardens*; which is a subject of no less vast extent than profit, when it falls into the hands of Persons that understand, and manage it aright. I shall therefore Treat of it somewhat Largely; with design to shew,

First, what may profitably enter into all sorts of *Kitchen-Gardens*, so completely to stock them that it may be said, there's nothing wanting in them, to which I shall add a Description of all seeds and other things, by which each particular sort of plant is produced and multiplied.

Secondly, I shall specify what products and provisions, a *Kitchen-Garden* should furnish us with every Month of the *Year*, and what should be the work of *Gard'ners* in every one of those Months, and shew how to do them well; and lastly, what should be found in every *Kitchen-Garden*, at all seasons, to convince us it is in a good Condition.

Thirdly, what sort of *Ground* is most proper for every particular sort of Plant, to bring it to its due perfection, and more especially which is the best way to make all sorts of *Legumes* turn to account, and answer expectation, whether they be such as are sown not to be removed, or such as must necessarily be transplanted, or lastly, such as are propagated without sowing.

Fourthly, how long each of them occupies its place, as well before it arrives to its due perfection, as whilst it continues bearing. I will also specify at the same time, what plants must be housed up in the *Conservatory* for our *Winter Provisions*, and what by the help of Art and Industry, may be produced in spite of the frost.

In the fifth place, I shall Teach how to raise all sort of seeds, for the more easy maintenance of our *Kitchen-Garden* in full stock, and shall declare how long time each sort will keep good, they having not all the same destiny in that respect.

And a *Gard'ner* that could but understand, what I have just now proposed in the above said, would in all likewise be as fit as could be desired, for an ordinary *Garden*.

But however, in my opinion, it would be further needful for him to have some little understanding, in the *Culture* of *Orange-Trees*, which, as we have above remarked, are indeed properly *Fruit-Trees*, though very often they are not so much considered for their *Fruit*, as for the *Flowers* expected from them; neither is that *Culture* any thing nigh so difficult as has been hitherto imagined. And likewise without any design, to encroach too much upon so many skilful *Artists*, whose peculiar province it is, to deal in all those Beauteous plants, that Compose the rich enamellings of *Parterres*, and *Flower Plots*, I may venture to put in a word or two, concerning the *Culture* of *Jessamins*, and most of the ordinary *Flowers*, which may be had every Month in the *Year*, which I shall do whilst I am treating of the products and provisions of each Month, in the same Sixth part. And it is certain, we may have some few *Flowers* in most *Gardens* of any reasonable bigness, and have them betimes too, witness that famous *Gard'ner* of \**Oebalia*; and therefore because every Curious Gentleman either not being in a condition, or not willing to keep several *Gard'ners*, many of them are often obliged to content themselves

\* Primal vere.  
Rofem, atq. Au-  
tu-mio capere  
Poma. Virg. Georg.  
: 4.

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selves with but one, to serve their *Curiosity*; this induced me to think it necessary enough, that the *Gard'ner* I instruct for the Service of an ingenious Gentleman, should find something here a little beyond the bare Knowledge of the *Culture* of a *Fruit-Garden*, or *Kitchen Garden*.

Perhaps in this Sixth part, an *Ordinary Gard'ner* will find light enough to enable him to content a *Master*, that has but a moderate passion for *Flowers*; and that's all I proposed to my self, by the instructions I have inserted relating to them. Upon which occasion, I cannot forbear *Exclaiming*, that happy are they who in matter of *Gard'ning*, know how to follow the wise advices of the *Prince of Poets*, and the Example of that *Gard'ner*, whom he has rendered so famous by his Verses; for that Illustrious Author likes well, we should admire the Beauty of Spacious *Gardens*, and praise them too, if we please; but yet he advises us to content our selves with small ones to *Cultivate*.

For it is indeed the interest of every one, of what *Quality* soever he may be, timely to resolve not only to choose that sort of *Garden* he fancies best, but especially to be Cautious how he undertakes to plant a larger one, than his conveniences will permit, that he may not be obliged to charge himself with more *Gard'ners* than he can easily maintain, and than are absolutely necessary for a Gentleman of his Estate and Circumstances. They which act otherwise in affairs of this Nature, do but prepare assured matter of great vexation to themselves, out of that very subject, which otherwise would have yielded them all the pleasures they expected from it. For *Gard'ning* ought to bring in profit; that was the first motive of its Institution: But *Profit* alas, seldom attends the endeavours of those Rash *Projecters*, that undertake things beyond their *Abilities*: no, that is a Prize only attainable by those that content themselves with feasible and moderate attempts.

*Agriculture* in general may be look'd upon as a Science of a vast extent, and proper to afford *Philosophical Wits* an infinite deal of Exercise, no part of *Natural Philosophy* yielding more excellent matter for contemplation, or being more fertile in useful and delightful experiments, than that which treats of *Vegetation*. For I know there are abundance of fine and curious Questions proposed in it; as for Example, Whether the *Sap* circulates in plants, as the blood does in *Animals*? Whether the *Roots* do actively attract, or only passively, without any action on their side, receive the juice which serves for the nourishment of every *Plant*; from whence that infinite difference of *Saps* proceeds, which produces so great a diversity and variety of *Tastes* and *Figures*, as we observe in *Plants*, and how the growth of *Plants*, in both length and thickness, is effected in their *Trunks*, *Branches*, *Leaves* and *Fruits*, &c. And there is an infinite number of other *Curiosities* of that nature, the knowledge of which would doubtless give a great deal of pleasure to *Learned Men*; but yet perhaps would not add any thing considerable to the skill or capacity of our *Work-man*, which is, as I have said, my principal aim in this Treatise. I shall however examine some of those ingenious and nice Questions, only to give my opinion upon them, at the end of this Treatise, which shall be done under the title of *Reflections* upon *Agriculture*.

But in the mean while I do not think it very necessary to examine any of them to the bottom, unless they be such as may probably serve to the establishing of some *Rules*, or *Maxims* proper for my design: that which is most particularly our Business here, being to shew what may most effectually procure us both plenty and pleasure, with the most easy and least expence. As for example, methinks 'tis very material, to know in some competent measure, the beginning and order of *Vegetation*

Qui passus vultu  
luctu curis, Ec-  
tant. Virg. Georg.  
a. Laudate in-  
genia rursus, Ex-  
iguam colite. Virg.  
Georg. 2.

Sedq. reverent  
nolle damus,  
dapius minus  
enacat inempti.  
Virg. Georg. 2.

Excusator of cul-  
ta exiguam, quon  
neglecta magnitu-  
do. Palladius.

Summa ambium  
in hoc spectanda  
sunt, ut fructus  
et maxime proba-  
rent, qui quam  
minimus impendio  
constitutus effi-  
citur.

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tion; to know what the *Sap* does both in the *Roots* and *Branches*, according as it abounds more or less in each of them, whether strong or feeble; to know what *Branches* are best disposed for bearing of *Fruit*, and which for producing of *Wood*; to know the reasons of *Tillage*, and of amendments, and several other things no less useful than those. Because without knowing such points as these, we could establish no certain method of *pruning* either *Roots* or *Branches*; of making *Trees* flourish, and advancing them into a Condition to be able to bear fine *Fruit*; of making all sorts of *Trees* and *Plants* vigorous, &c. which are the things I think most particularly necessary to be known.

And accordingly 'tis in the decision of these sorts of difficulties that I have endeavoured to reason with the greatest evidence I could, the better to confirm the Instructions I give, and which I found only upon very frequent, very long and very exact observations made by my own self in all the parts of *Gardening*, without taking any thing upon trust, upon the report of any other Person. So that here I communicate to the World all the light I have acquired in this sort of *Agriculture*: and in so doing, I give an account of all I have observed *Nature* to do in the production of *Vegetables*. And I give this account not only without any reserve, but sincerely and faithfully, and according to the best of my slender Skill and Capacity. I have expressed my self in the plainest manner I possibly could, as being well enough convinced, that this kind of matter, requires no lofty or swelling style, and needs no greater ornament than to be set in a clear light, and to be well explained, and well understood.

Ornari res ipsa  
negat, contenta  
doceri.  
Horace.

I shall here add, That the third Part of this Work, where I treat of the choice and proportion of *Fruits*, was that which cost me the greatest pains of any, and that which, if I mistake not, will prove one of the most useful. My undertaking therein is as *Great* as *New*; that which makes me call it *New*, is because that hitherto I never knew any Body that ever projected the like: And that which induces me to call it *Great*, is the great variety of matter, which I am to treat of in it; which though it be common and ordinary, yet is little understood, and consequently gives a great deal of trouble to most *adventurers* in these *Curiosities*. Those Directions for the choice of the best *Fruits*, that proportion of number to be observed of *Trees* of every kind, according to the bigness of the *Gardens*, and the *Quality* of the Ground. Those Rules for the *Situations* and *Distances*, &c. which I there lay down, are all matters of very great importance in *Gard'ning*; of which therefore 'tis so highly necessary to be well informed, that 'twill be otherwise impracticable, to plant with success.

But what I find most troublesome in this attempt, is, that 'tis impossible to perform it in few Words: so that to manage it with the conduct it requires, I find my self obliged to make a large discussion, and under an indispensable necessity to promise a Preface too, both somewhat long, and perhaps altogether tedious, both to my self, and to those for whose Service I make it. So that though I should not otherwise have misfortune enough by giving occasion to some curious Gentlemen to quarrel with me, for the judgment I shall give of every particular sort of Fruit, whether I should care or not for their exceptions; yet the frightful number of difficulties I must expect to meet with in the Execution of so great an extent, might be alone sufficient to make me lose Courage, and indeed had almost actually prevail'd with me to desist, not only while I was but beginning it, but after I had made a considerable Progress in it.

How

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However being persuaded on one side, that my Work would have been much less useful than I intended it should, if this part had been wanting to it, and on the other hand, being extremely zealous to pleasure, and no less averse from the least inclination to offend any body, I took courage to pursue my project, in good hopes, that at least a considerable number of those *Admirers of Fruit and Fruit-Trees*, and which are the only Persons, which I value in this matter, and for whom I designed it, will kindly accept a work which so much shortens their way; And if there happen to be any among them that may think they have reason to find fault with my palate, because they will not always find it conformable to their own, I have reason to believe they will do it without any displeasure at me, or railing at my innocent design, since I pretend not to confine, or blame any man in point of *Taste*. No, I know well enough, that by the order of *Nature*, every Man is *Sovereign Judge* of his own cause in that Question, as well as I, so that as we say commonly, Peoples *Tastes* are not to be disputed.

This being supposed, I shall need only to follow the resolution I have taken, to use all imaginable precautions, to keep as near to that Compliance in all the parts of this Treatise of *Gardening*, as I shall be able, insisting however all along according to this principle, That *Doctrinal Instructions* are not to be managed like Works of *Eloquence*; for in these latter indeed, \* all is not to be said, that can be said; an Orator's part; being only to give the Ingenious Auditors a Glimpse of the beauties of a subject, and to leave them the pleasure to make further discoveries of its Charms, themselves; But in this Treatise, I think I cannot do better than to follow the wise Counsel of a Lord, as illustrious for the great extent of his knowledge, as for his Birth, Virtue, and eminent employments; who advised me particularly, never to suppose others to know what I know, in matters of this kind, being persuaded that was the only sure Method I could use, to succeed in my endeavours; and therefore, I ought to be careful to omit nothing, and to leave nothing doubtful in my instruction, which being by this means very large, and perhaps very intelligible too every where, will likewise certainly prove as useful in all its parts, as I desire.

This Consideration necessarily engages me to give very long, and very particular accounts of things, for which exactness, I demand before hand some Indulgence, not doubting but to most Readers, it may seem too great; but I have likewise no less reason to believe, that if it were less, it would be attended by many much more offensive faults of another kind.

Besides, if the length of this Treatise disgusts any Persons from Reading it, in all likely-hood 'twill be such as are wholly taken up with greater businesses than this, at which I am very well satisfied, it being only intended for People not otherwise employed, and for hours of Recreation: At least they who will please to take the pains to examine my conduct, will see for my Justification, that, as I have already said, I have not pretended any thing else, but only to declare my opinion, upon the subject I treat of in that Third part.

And if any Gentlemen be content to follow my Judgment, without entering into any discussion of the Reasons which I make use of to enforce it, they may let alone, not only my *Preliminary Discourse*, and my particular Considerations, but likewise the descriptions I have made of the several sorts of *Fruits*; and so may go strait to the places where I conclude, what I really think is to be done, in order to plant wisely and happily, (which is noted all along in the margin, and more especially,

\* Nonnulli Re-  
spondenda Audi-  
tori, quæ suo  
Matre colligat.  
Dummodo Plale-  
roni de Elocutione.  
Qui omnia expo-  
nit Ausit rî, vel  
lectet, ut nulla  
mente piazito,  
Similia est ei qui  
Auditozem vel  
Lectorem impro-  
bat aqz, Conser-  
nit.

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in the Abridgment I have added at the end of the Treatise) for there 'tis, they will immediately find all the assistance they suppose they need, and for which they are willing to be obliged to me.

That which moves me to undertake a thing in my opinion, so useful and Commodious, is, because when I see many *Gardens* of all sorts of Sizes, as it has often hapned, and daily happens to me, I see indeed some *Fruit* there, but withal at the same time, I see there the three greatest inconveniences to be feared in that respect.

The first is, that hardly any sorts of *Fruits* that are well known, (which is no very hopeful sign of their Goodness) are to be seen there, and which is most of all to be found fault with, the *Good* ones are more scarce there than the *Bad* ones: As for Example, to instance in *Pears*, which of all *Fruits* is that of which men plant most, we shall commonly find in *Gardens*, more trees of *Catillacs*, *Orange Pears*, *Besider's*, *White Butter Pears*, *Jargonells*, *Summer Boncretiens*, &c. Than of *Bergamots*, *Virgoulees*, *Lefchafferies*, *Ambrets*, *Thorn Pears*, *Russelets*, &c.

The second Incommodity is, that, if two or three kinds happen to be there that are truly *Good*, they will be there almost all alone, and that pretty often under different Names. For instance, we shall find a *Garden* planted almost all with *Winter Boncretiens*, *Butter Pears*, *Messire Johns*, &c., or else almost all only with *Virgoulees*, *Russelets*, *Verte Longnes*, or *Long Green Pears*, &c. without a happy mixture of the one with the other.

Lastly, the third and most considerable Inconvenience is, that we seldom see in any *Gardens*, a succession of *Fruits* so judiciously contrived, that without any discontinuation, we may expect a perpetual supply of them in *Summer*, *Autumn*, and *Winter*, which yet with due regard had to the Quality of their Ground, might easily be effected; they may perhaps boast, they have a sufficiency or perhaps too much, either in one of the three *Seasons*, or during some part of each of them, as for Instance, that they have some *Blanquets* or *Russelets* for *Summer*, some *Butter Pears* and *Bergamots*, for *Autumn*, and some *Boncretiens* and *Virgoulees*, for *Winter*, &c. But perhaps, they have few other *Fruits*, or perhaps none at all, to furnish successively every *Season* so long as it lasts, and much less to furnish all the whole three *Seasons*, one after another, without intermission.

These are doubtless all very unpleasant *Irregularities*, and which proceed from the want of due skill in contrivance, whilst a *Garden* is planting; for at that time, Gentlemen commonly begin first with telling their design to some friends, either to demand their advice, (which is good, if they be persons Skill'd in *Gardening*) or else chiefly to excite their Liberality, if they have any trees to give away, which usually produces, as one may say, rather an *Hospital*, or confused *Chaos* of *Fruit-Trees*, than a *Regular Garden*; And if they have not skilful acquaintance to consult, they send, or perhaps go themselves to the *Nursery Gardens*, which are ordinarily very ill contrived; they name some few sorts of *Fruits* they intend to plant, and for all the rest only signify in general, what number of trees they would have, without being able to name precisely the particular sorts they have occasion for, and much less to specify what numbers they want of each. And indeed 'tis because they are perverted, there is no better way to be taken, considering that (if I may have leave to use those new Terms) there are almost no able *Frugis Consultants*, or *Fruit Sages*, nor any good Books of this *Frugis prudence*, or *Science of Fruit Culture*, from which they may furnish themselves with the necessary instructions for the contriving of a well modelled *Plantati-*

on,

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on, and therefore they leave all to the Discretion of some *Plant-Merchant*, who perhaps on one side, is not very knowing, nor over well stocked, though at first he endeavours to persuade his Customers, that he has all sorts of good *Fruit-Trees*, as he would prove by the Testimony of some old confused *Catalogue* he fails not to shew them, and on the other side, is above all things desirous, to take advantage of the occasion presented him, to put off his ware, because he is assured, it will not keep long good.

So that our new *Curious adventurer* is forced to plant such Trees as either his *Friends* have given him, or as the *Plant-Merchant* has sold him, whether they be *Good* or *Bad*, and so provided the number he desired, be completed, he rests satisfied and contented, and quietly lets pass the first four, or five, or six years in expectation, till every Tree may shew what it is able to perform: And he finds here and there one perhaps, that bears *Fruit*, to amuse the Master's hopes for some while, but at last, time shews him a true, but too late a sight of the errors into which he was unhappily fallen.

But because the Trees are now grown tall, how ill satisfied forever a man may be at the *Fruit* they produce, he can hardly find in his heart to resolve upon new grafting them, and much less upon beginning a new *Plantation*, so much afraid are people of engaging in any attempt to correct their first mistakes, that is attended with the hazard of making new ones equally pernicious; and by that means they find themselves plunged in the mire, and are so dispirited as to remain in it, vexing in the mean while, to see themselves deceived of the hopes they had conceived of their beloved project; which produces that Disgust which we observe so commonly, to ssee some men, and make them, though at first they appeared passionately enamoured with their *Gardens*, seek in a few years after, to get rid of them at any rate.

There are likewise two other faults that are very common: The first is that for want of knowing the reasonable distances that are to be observed between Trees, with respect to the goodness of the *Ground*, the height of the *Walls*, and the quality of the several sorts of *Fruits*; They are often planted either too nigh to, or too far off one from the other; The second is, that likewise for want of duly understanding what *Situations* agree best with each sort of Tree, a considerable number of them are often unluckily planted in *unkindly Places*.

And is it possible for a man animated with so warm a Zeal for *Gard'ning* as I am, not to be sensibly touch'd at all these misfortunes, and not to have some compassion upon those that unwarily engage in the *Curiosity* of the *Planting* and *Culture* of *Fruits*, without qualifying themselves with some little knowledge in it? No, certainly, and therefore, as far as possibly I can, I will endeavour to prevent all those faults, and to lay down directions, how to plant with so much circumspection for the future, that if a Gentleman has a *Garden* big enough to receive any reasonable number of Trees, he may have in it all the principal sorts of *Fruits* that are to be had, for every *Season* of the year.

This reason that concerns the contriving of a continual successive supply of *Fruits* throughout all the *Seasons*, may prevail with me sometimes in *Plantations*, to prefer a meaner *Fruit* before a better, and that because the better comes in, in a time when I may have a sufficient provision of other admirable sorts besides, and the meaner one comes in a season, when the scarcity of the most excellent *Fruits* being very great, we think our selves very happy, if we can be supplied at least with some of a middling goodness: And accordingly for instance, if I had but little room for

Dw.urf

Dimidium facti  
qui bene cepit,  
habet. Ovid.  
A Work's half  
done that's well  
begun.

Ignorantia vix  
mecum miserabil  
aggettes. Virg.  
Gorg. 1.

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*Dwarf Pear-Trees*, I would plant sometimes a *Dry Martin*, or a *Bugi* which are pretty good *Winter Pears*, before a *Robine*, or a *Musked Summer Boncretien*, &c. which are *Summer Fruits* much better in themselves than the two precedent ones. I shall afterwards shew what Reasons oblige me to follow this Method.

They which, as I may without vanity, say, know not so much in this matter as I do, may perhaps be surpris'd at such a choice, which without the knowledge of the particular circumstances that influenced me to make it, would appear somewhat odd, but I dare assure them, they will not find it not very easie to censure my *Conduict*, if they will but allow themselves time to examine my *Reasons*.

But because if a Gentleman, were never so well Experienced in the Knowledge of the good sorts of *Fruits*, he would be never the further advanced, if it were very difficult, or perhaps Impossible, to find them in the *Nursery Gardens*, this is the Answer I make to so Important a Difficulty.

I Hope my exactness in that *Choice* and *proportion* of *Fruits* I shall prescribe, will produce a *Regulation* and kind of *Reformation* in all *Nursery Gardens*; I mean, that it will not only banish all confusion, and effects of unskillfullness out of them that have been ill contriv'd, but will cause new ones to be modell'd with all possible *Art* and *understanding*; And then it will happen, that instead of grafting any more either of those kinds I reject by name, or of those I name not, that both of them will grow so much out of request, that they will be but lost to the *Gardeners*, and consequently they will be oblig'd for their own interest, to graft only those which I express some esteem for; whether they be new or Ancient Kinds, and none at all of the others, and fewer of those of which few are to be planted, and more of those of which I advise to plant the greatest number; by which means, the able *Plant-Merchants* may be assur'd of a good and never-failing vent for their *Goods* on one side, which may encourage them to do better and better, and on the other, all *Gardens* will insensibly come to be establish'd upon a perfect *Model*, which is the main thing aim'd at for the pleasure and satisfaction of all our *Curious Gentlemen*.

And in the mean time, till *Nurseries* can be brought into that state of *Perfection* I have propos'd, so that we may one day enjoy the convenience, to find in them a sufficient store of all sorts of good *Trees*, we may have occasion for, now *Gentlemen* are inform'd by the choice I have express'd in this *Treatise*, which are the *Prime Fruits* of every *Season*, if they happen, among a great number of other *Fruits* which are *rejected*, to find but a part of those that are *Prized*, they will do well to take rather more of them than they first intend'd, than to venture to meddle with any of the worse kinds. And in doing this, their best way will be, to observe these two resolutions, First, either to plant no *Trees* but of those few *Good sorts* which they have found, and to fill up all the places they have to fill, wholly with them, or else to stay till another year, to gain time to look for those sorts they could not find the last, rather than to hazard the planting of any *unknown* or *doubtful* kinds.

And perhaps, as it is very expedient they should, they will have so much wise forecast of themselves, to prepare at least, in the mean while some *Stocks* to graft those kinds upon the next, which they could not find the last year, and which I have advis'd them to plant; which they may do either upon some of those supernumerary *Trees* they have already taken, or upon good *Wildings*, which they may plant ready in their assign'd places, for that effect.

For

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For, to conclude, in the matter of *Plantations*, as soon as ever we have resolv'd to have a *Fruit Garden*, we must not forget any thing that may assist us to follow exactly *Cato's* precept, which advises us to gain time, and to advance our *Projects of Curiosities* in this Nature, with all the Expedition imaginable. For, says he, *Ædificare, diu Cogitare oportet; Continerere, facere, non Cogitare, id est,*

*He that Builds, should consider long beforehand of his work; but he that Plants, must act, and not think: or He must act at least as nimbly as Thought itself.*

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ADVER.

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## ADVERTISEMENT.

I Cannot conceive but it must needs be a very acceptable *Advertisement*, and of Universal Concern to all Noble-men, and Persons of Quality, lovers of Gardens, and Improvers of Plantations (of all Diversions and Employments the most Natural, Usefull, Innocent and Agreeable) at what Distance soever (from a Place of so easy and speedy Correspondence and which is so nere this great City) to give this Notice.

That of all I have hitherto seen, either at Home or Abroad; or found by Reading many Books publish'd on this Subject, pretending to speak of *Nurseries* and *Plantations* for store and variety; Directions for the Designing (or as they term it) the Skillful Making, Plotting, Laying-out, and disposing of a Ground to the best Advantage: In a word, for whatsoever were desirable for the Furniture of such a Ground, with the most excellent, and *Warrantable* Fruit (I say *Warrantable*; because it is peculiarly due to their honest Industry, and so rarely to be met with elsewhere) and other Accessories to Gardens of all Denominations, as in that Vast, and ample *Collection* which I have lately seen, and well consider'd at *Brompton Park* near *Kensington*: The very sight of which alone, gives an *Idea* of something that is greater than I can well express, without an enumeration of Particulars; and of the exceeding Industry, Method and Address of those who have undertaken, and Cultivated it for publick Use: I mean Mr. *George London* (chief *Gardner* to their Majesties) and his Associate Mr. *Henry Wise*: For I have long observ'd (from the daily practice, and effects of the laudable Industry of these two Partners) that they have not made Gain the only mark of their Pains; But with Extraordinary, and rare Industry, endeavour'd to improve themselves in the Mysteries of their Profession, from the great Advantages, and now long Experience they have had, in being Employ'd in most of the celebrated Gardens and Plantations which this Nation abounds in; besides what they have learn'd Abroad, and where *Horticulture* is in highest Reputation.

I find they not only understand the Nature and Genius of the several Soils; but their usual Infirmities, proper Remedies, Composts and Applications to Reinvigorate exhausted Mould; sweeten the foul and tainted, and reduce the Sower, Harsh, Stubborn and Dry, or over moist and diluted Earth to its genuine Temper and Constitution; and what Aspects, and Situations are proper for the several sorts of Mural, Standard, Dwarf and other *Fruite-trees*.

They have made Observations, and given me a Specimen of that long (but hitherto) wanting particular, of Discriminating the several kinds of Fruits, by their *Characteristical* Notes, from a long, and Critical observation of the *Leaf*, *Taft*, *Colour*, and other distinguishing Qualities: So as one shall not be impos'd upon with *Fruits* of *Several Names*; when as in truth, there is but one due to them. For instance, in *Pears* alone, a Gentleman in the Country sends to the *Nurseries* for the *Liver Blanch*, *Pignigny*, *de chouille*, *Rattau blanc*, &c. the *English St. Gilbert*, *Crambourn Pears* (and several other names) when all this while, they are no other than the well known *Cadillac*. The same also hap'ning in *Peaches*, *Apples*, *Plums*, *Cherries* and other *Fruit*; for want of an accurate examination

nation (by comparing of their Taste, and those other Indications I have mentioned) For which Gentlemen complain (and not without cause) that the *Nursery-Men* abuse them; when 'tis their Ignorance, or the *Exotic* Name of which they are so fond.

I find they have likewise apply'd themselves to attain a sufficient Mastery in *Lines* and *Figures* for general design, and expeditious Methods for casting and leveling of Grounds; and to bring them into the most apt Form they are capable off; which requires a particular Address, and to determine the best Proportions of Walks and Avenues, Starrs, Centers, &c. suitable to the lengths; and how, and with what materials whether *Gravel*, *Carpet*, &c. to be layed.

They have a numerous Collection of the best *Designs*, and I perceive are able of themselves to Draw, and contrive other, applicable to the places when busie Works, and Parters of Imbroidery for the *Coronary* and *Flower Gardens* are proper or desired. And where *Fountaines*, *Statues*, *Vasas*, *Dials*, and other decorations of Magnificence are to be plac'd with most advantage.

To this add, a plentiful, and choice Collection of *Orange-trees*, *Lemon*, *Mertil*, *Baies*, *Jasmines*, and all other Rarities, and Exotics, requiring the *Conservatory*; after they have embellish't their proper stations abroad during the *Summer*, and for continuing a no less ornament in the *Green-House* during *Winter*.

They have a very brave and noble Assembly of the *Flowery* and other *Trees*; *Perennial* and variegated *Ever-Greens* and shrubs, hardy, and fittest for our *Climate*; and understand what best to plant the humble *Bosage*, *Wilderness*, or taller *Groves* with: where, and how to dispose, and govern them, according as Ground, and situation of the place requires both for shelter and ornament. For which purpose (and for Walks and Avenues) they have store of *Rivers*, *Limes*, *Platans*, *Constantinople-Chestnuts*, *Black-Cherry-trees*, &c.

Nor are they, I perceive, less knowing in that most useful (though less pompous part of *Horticulture*) the *Potager*, *Meloniere*, *Culinarie Gardens*: Where they should most properly be plac'd for the use of the Family; how to be planted, furnish'd and Cultivated so as to afford great pleasure to the Eye, as well as profit to the Master. And they have also *Seeds*, *Bulbs*, *Roots*, *Slips*, for the *Flowery Garden*, and shew how they ought to be order'd and maintain'd.

Lastly, I might super-add, the great number of *Grounds* and *Gardens* of Noble-men and Persons of Quality, which they have made and planted *ab Origine*, and are still under their Care and inspection (though at Considerable Distances) and how exceedingly they prosper, to justify what I have freely said in their behalf.

And as for the *Nursery* part in *Voucher*, and to make good what I have said on that particular, one needs no more than take a Walk to *Brompton Park* (upon a fair Morning) to behold, and admire what a *Magazine* these Industrious Men have provided, fit for age, and Choice in their several Classes; and all within one Inclosure: Such an Assembly I believe, as is no where else to be met with in this *Kingdom*, nor in any other that I know of.

I cannot therefore forbear to Publish (after all the *Encomiums* of this great Work of *Monsr. de la Quintinye*, which I confess are very just) what we can, and are able to perform in this part of *Agriculture*; and have some *Amanities* and advantages peculiar to our *own*, which neither *France*, nor any other *Country* can attain to; and is much due to the

Industry of Mr. *London* and Mr. *Wife*, and to such as shall Imitate their  
Laudable Undertankings.

Be this then for their *Encouragement*, and to gratifie such as may need or  
require their Assistance.

7. EVELYN.

**C***Abala, five Scrinia Sacra*: Mysteries of State and Government, in  
Letters of Illustrious Persons, and Great Ministers of State, as well  
Foreign as Domestick, in the Reigns of King *Henry* the Eighth, Queen  
*Elizabeth*, King *James*, and King *Charles*. Wherein such Secrets of Em-  
pire, and Publick Affairs, as were then in Agitation, are clearly Repre-  
sented; and many remarkable Passages faithfully Collected. To which  
is added in this Third Edition, A Second Part, consisting of a Choice  
Collection of Original Letters and Negotiations, never before published.  
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Marginal Notes and Quotations of the cited Authors. And an Account  
of the Author's LIFE. To which is added a short Character of the Au-  
thour and Translator, by way of Letters; Written by a Person of Honour.  
New rendred into English by *Charles Cotton*, Esquire. Both sold by *Matthew  
Gillyflower*, at the Spread Eagle in *Westminster-Hall*.

POMONA

# POMONA

## IN AGRO VERSALIENSI

### QUINTINIO

#### REGIORUM HORTORUM

#### CULTURÆ PRÆFECTO.

**V***ersalii Colles, atque alta Palatia ruris,  
Et vitrei Fontes, Rivoque, & amena Fluenta,  
Quorquot & hic habitant, inter tot divitis Aula  
Regificos luxus, vix rustica Numina, Nymphæ,*

*Vos etiam non jam indociles cultoribus Horti,  
Regales Horti: decus unde, & gloria vestris  
Arboribus venit, & cultis nova gratia campis ?  
Quintinio date ferta Deæ, ramoque virenti  
Vos Nymphæ hortorum doctam præcingite frontem,  
Telluris contra ingenium, Soleisque malignos,  
His florere dedit dudum infelicitibus hortis;  
Fas olli fuerit, quos sevit, carpere ramos,  
Dum sub Sole alio Lodoicus ab hoste reportat  
Longè alias lauros inimico sanguine tinctas.*

*Versaliiis sincera habitant ubi Gaudia campis,  
Pomona sterilis dudum, & sine honore gemebat,  
Imprimis dum cuncta virent, dum cuncta resurgunt,  
Et prisici redeunt ævi melioris honores,  
Principe sub tanto: vitio telluris iniquæ  
Squallebat radices egens sine fructibus arbor;  
Hic regnare omnes baud æquâ mente ferebat,  
Exilio è longo quas Rex revocaverat Artes;  
Quod magis urebat pectus: fas cuique Dearum  
Nativas depromere opes, ostendere honores,  
Principis ambibant sibi consiliare favorem.  
Sola gemens socias inter despecta sorores  
Deserere has sedes, nec non regalia tellæ  
Constituit: tanto pudor est se ostendere Regi  
Vilem adeo, nudamque opibus, proprioque carentem  
Ornatu foliorum & pulchro frontis honore.  
Nam nulli ad pectus, nullique in vertice flores;  
Illa suis sine muneribus, sine divitis anni*

Exuvitis calathos agrè monstrabat inanes:  
Autumno indignante, & stentibus undique Nymphis.  
Anxia, tristis, inops, sælices transfuga terras  
Quærebat; propriis jumentum deserta colonis:  
Desperat se posse per ulta negotia fessum  
Principis oblectare animum, licet omnia tente,  
Tellurem & votis, Divosque imploret agrestes,  
Nec quicquam: stant campas thers, dextræque rebellis  
Respuit agricola, suis arvis incubat horror.

Ergo qui potuit gentes frænare superbas,  
Plumibus dare jura, levesque attollere in auras  
Aerium per iter suspensis fluitibus amnes,  
Non legem dabit arboribus, nec dura remittet  
Hujus ad imperium sese Natura, benigno  
Afflata tutique: ut potius mitescere discat,  
Atque suas obliata vices ingrata rebelles  
Cultura patiens subigatque, & molliat agros!

Sed quid ego hæc autem? mater intravit illa,  
Et placet ipse sibi nativus scabibus horror.  
Hæc telluris erat facies miseranda, sine ullo  
Cultore & sterilis, sine re, sine nomine campus,  
Hinc Dea Versalis jamdudum in gloria rure  
Decedens, alias terras, alia arva petebat;  
Sanctioris pede præcipiti properabat in hortos,  
Nodo vincula comam, & vestes collecta fluentes.  
Cum Quintiniades properantem fessit, & Arti  
Confissus meritis Pomona spondet honores.

Versalides plaufere Deæ, festusque per altos  
Rumor iit colles, fore mox regalibus hortis,  
Quod non agricolæ, nec sperare coloni,  
Quæstum regale decus; simul explicat Artem,  
Divinam plantandi Artem: ceu numine plenus  
Re super hortensi memorabat multa, latentes  
Primævæ rerum repetens ab origine causas.  
Addebat dicenti animos præsentia Regis:  
Explorat terræ ingenium, Soleque, suosque  
Astrorum influxus: prudens discriminat agros,  
Nam plantis tellus non convenit omnibus una.

Optimus ille locus pomis, hæc optima sedes  
Intor saxa piris, citros necat humida tellus:  
Hic Solem accipiet, cæloque fruatur aperto,  
Et fructus longè meliores proferet arbor:  
Gaudebunt illic nati de semine flores;  
Paulatim hæc tellus succos dedisset agrestes  
Emendata fimo, cultum si dura recuset  
Et sterilis nimium, & nullâ superabilis arte,  
Fundum omnem exhauri, & meliorem suffice terram,  
Qua vicinus ager de se nimis uber abundat;  
Si quis amor, teneatque tui te gloria ruris,  
Non pigeat plenis terram asportare canistris:  
Aspera mitescet sensim natura locorum,  
Nec sese agnoscat nativæ oblata rigoris.

Sic dabat & leges, sic & præcepta colonis,  
Plantandique modos, & tempora certa docebat:

Quin & adoptivos teneris includere ramos  
Arboribus monstrabat: habent sua sædera plantæ:  
Cunctis seminibus vis indita, & indita plantis,  
Quæ vel amant jungi, vel sædera jussu recusant:  
Sunt odia arboribus, sunt & quoque mutui amores,  
Hæc sociam petit, & plantæ se jungere amanti  
Quærit, & appositis se cælo attollere fulcris.  
Quam facillè observes: dum crebra perambulat auras,  
Et se inclinat amans pendentibus undique ramis,  
Ipsa suos prodit, simul & testatur amores.  
Illa superba suis, opibus non indiget ulla,  
Commendata suo satis & ditissima fructu  
Consortem timet, & succos miscere refugit.  
Hæc tamen advertas; truncum ditabis inertem  
Connubio rami alterius, nam sponte debiscit,  
Et vulnus patitur fructibus melioris amore,  
Gaudebit sterili nova poma ostendere tranco  
Arbor, & ipsa novas jactabit adultera frondes.

Si mendax fundus, mendaci credere fundo,  
Ne fata permittas, quæ sub tellure profunda  
Radices altas cæca in penetralia mittat.  
Nam topus scaber, aut urens argilla, litensue  
Creta nocet sæpè arboribus, quæ sicca negabit  
Vitales succos, animæque alimenta fovendæ;  
Nec metuenda minis vitabis scrupula saxa.  
Nil humoris habent, paulatim nobilis arbor  
Languescet moriens saxosis credita terris;  
Sed fibris quæ mordet humum levioribus, omni  
Se monstrantem agro, florum plantabis amantem,  
Surgere manè novo quam contemplabere, sylvam.  
Hæc pluvii nisi roris eget, facilique labore  
Crescet & innato mulcebit odore colonum.  
Hæc præcepta memor servaveris, omnia cedent  
Agricolæ, lætis accedet copia campis,  
Et sterilis nuper jam se mirabitur hortus.

Addiderat majora, sed hæc præcepta serenentem  
Abrumpit Lodoicus, & illum præscit hortis,  
Illum adeo insignem, cui se natura videndam  
Omnino exhibuit, nondum intellecta colonis.

Regales ubi Quintinius circumspicit agros,  
Qui dudum ingratis regionibus insidet horror,  
In Lybie montes, loca dura, & inhospita saxa.  
Seceffit; nova tunc facies sælicibus hortis:  
Quin etiam sentit tellus inarata colonum,  
Et regale solum hoc uno cultore superbit:  
Hinc dubium est, an præclaræ plus debeat Arti,  
Quam natura sibi: usque adeo labor utilis arvis.  
Hic hyemes nil juris habent; læta omnia, læta:  
Vernat humus, pulchris se ostentat fructibus arbor,  
Seque ornant varijs depicti floribus agri;  
Sunt silvæ ingentes, sunt & nemora alta, recessusque  
Umbrosi, insanæ loca tuta tumultibus Aulæ.

*Verſaltis viſa hinc Pomona ferocior arvis,  
Florigerum caput attollens, calathique tumentes  
Oſtendens natos è fundo divite fructus,  
Regales inter par Nympha incedere Nymphas.*

Santolius Victorinus.

IN TABELLAM  
QUA IMAGO  
EJUSDEM QUINTINII  
EXPRIMITUR.

*H*anc decorate Deæ quotquot regnatis in hortis,  
Floribus è vestris ſupràque, inſràque Tabellam.  
Hic dedit arboribus florere & edulibus herbis,  
Et ſe mirata eſt tanto Pomona colono.

Santolius Victorinus.

VERSES

VERSES

TO

Mr. Quintenay

Written Originally in LATIN

BY

*Santolius Victorinus* a French Man.

**Y**E Hills, ye purling Streams, and chriftal Springs  
Ye ſtately Piles, the Rural Seats of King ;  
Ye Sylvan *Nymphs*, who by exalting fate  
The Country loſt, and here ariſe to ſtate :  
Ye Royal Gardens taught at laſt to bear,  
No more ungratefull to the Tiller's care ;

Whence riſe your Flowers, your Trees, what Art doth yield?  
Whence ſpring the Beauties that adorn your field ?

Wreath Lawrels, wreath, a laſting Crown prepare,  
For learn'd *Quintinius*, and repay his care :  
Tho' cold unlivening Suns, and barren Earth  
Oppos'd his Art, nor would aſſiſt the Birth,  
He ventur'd on, and his induſtrious toil  
Beſtow'd new Beauties on the Horrid ſoil :  
Repos'd in Eaſe, and ſtretcht in ſoſteſt Bowers,  
Let Him enjoy *his* Fruits, and pluck *his* Flowers ;  
Whiſt *L—*s conquers Lands unknown before  
And reaps freſh Lawrels on a foreign ſhore.

At gay *Verſailles*, the brighteſt Court below,  
Where Pleaſures dwell, and Joy unmixt with woe ;  
*Pomona* mourn'd, nor would her grief be tatie,  
Of Honors void, and conſcious of her ſhame :  
She mourn'd to ſee, when our Auspicious King  
Made all things flouriſh, and reſtor'd the Spring ;  
And better days, that *ſhe* alone ſhould find,  
The Heaven adverſe, and prove the Earth unkind :  
In vain ſhe plant'd, Earth reſuſed the root,  
And wither'd Trunks deny'd the promis'd Fruit.

She mourn'd to ſee all Arts but *Hers* reſtor'd,  
Make gratefull preſents to their greateſt Lord ;  
She mourn'd to ſee with what high Pride they ſtrove,  
To ſhow their Duty, and expreſs their love ;  
Whiſt he their labours generously ſurveyes,  
With wealth ſupports them, and excites with praiſe.  
This mighty *Monarch* partial foes confeſs,  
None cheers the Arts ſo much, or needs them leſs :

Thy

Thy glorious Actions foreign Aids refuse,  
Lasting themselves, and great without a Muse.

Contemn'd she liv'd despairing of Access,  
In such an Habit, and so vile a dress,  
No flowers hung on her Breast, her Head was bare,  
And rustling Winds dispers'd her scatter'd Hair;  
Her Basket empty, she that look'd so gay,  
When deckt with all the various pride of May;  
Had now her Honours, and her Beauty lost,  
As beat by Winters Snow, or nipt by Frost:  
Old *Autumn* mourn'd, her Sister *Nymphs* around,  
Conspir'd in Tears, and curs'd the barren ground.

At last (the glory of our mighty King  
Recall'd her often, and unsledg'd her Wing,)  
Tir'd with Disgrace, unable to support  
Her trouble, she resolves to leave the Court;  
To fly to happier Seats, and strive to gain  
Her usual Honours on a better plain:  
She fear'd, now *L——s* had resign'd his case,  
To Arms and *Mars*, her Art too mean to please,  
Tho' Earth, and *Sylvan* Gods should aid to bring,  
A Present equal to so great a King:  
But Earth deny'd her Aid, the stubborn Land  
Prov'd more rebellious to the Tiller's hand;  
All care refus'd, and much averse to Grace,  
Was pleas'd with native Horror on its Face.

That mighty Prince, whom wildest \*Streams obey,  
At whose command they take an Airy way,  
O'er Mountains climb, ascend the steepest Hill,  
Forget their Nature, but observe his will;  
Shall Earth oppose? Shall feeble Fruits and Trees,  
Deny Obedience to his great Decrees?  
What start of Nature! Let her learn to yield,  
To know her Duty, and correct the Field.

But I return, the stubborn Fields remain,  
Intractable, and all her care is vain:  
Rude, unmanur'd, the Dales and Mountains lay,  
An undigested heap of barren Clay;  
A Desert frightfull to the sight, the worst  
That Nature knew, e'er since the Ground was curs'd.

To leave these Seats, she imp'd her wings a new,  
She all the Winds to her assistance drew;  
She just took rife for flight, and mark'd her way,  
For the delicious plains of *Signelay*.  
*Quintinius* stop'd her, beg'd a short return,  
And said; No more shall there be cause to mourn;  
You shall enjoy, so well his Art he knew,  
The choicest Honours to *Pomona* due.

She turn'd, the *Nymphs* a general shout began,  
And o'er *Versails* the pleasing Rumor ran;  
That now the time was come when Fields should bear,  
No more ungreatfull to the Tiller's care;  
When gay *Pomona* should her state regain,  
And live the glory of the Royal train:

Yet still she doubted, many vows before  
Deceiv'd her Hopes, and she would trust no more;  
Till learn'd *Quintinius* did his rules impart,  
And prov'd the sure Foundations of his Art!  
He show'd how others spent their fruitless toil,  
Not marking well the *Genius* of the soil;  
He taught, as fill'd by some Diviner fire,  
What site, what Suns, the different Fruits require.  
What proper Grounds peculiar Trees prefer,  
The King stood by, and caus'd him not to Err:  
For Kings are Gods, and they divinely taught,  
Their subjects influence, and secure their thought.

All Soils affect not every sort of stock,  
The *Apple* chooseth Earth, the *Pear* the Rock;  
The *Peach* flies Marishes, some delight to share  
The hottest Sun, and choose an open Air:  
Some love the shade, here Trees and Shrubs will spread,  
Their Flowers from Seed adorn a noble Bed.  
Some Soils will mend, and care and pains produce  
What Nature wants, and give a better juice.  
But if untractable, remove the old,  
And fill thy Baskets with a fresher Mould;  
Let richer Grounds the poorer Fields maintain,  
And lend their Plenty to a barren plain.

These Laws *Quintinius* gave, and every part  
Appear'd the product of the greatest Art:  
He show'd the Seasons, and *Pomona* saw  
The rules exact as she her self could draw;  
But more he taught, how Trees and Fruits improve  
By mutual Bonds, and know th' effects of Love;  
He taught how barren stocks unus'd to bear,  
Themselves will thrive in an adopted Heir.  
For Trees have seeds of Passions, Love and Hate  
Rule them, and make a difference in their state.

One seeks a Prop, her amorous Branches rove  
In wanton Mazes, and confesses their Love;  
Rais'd by her Mate she thrives, but dies disjoyn'd,  
The weaker Vessel of the woody kind.  
Another single stands, the lofty Maid  
In her own fortune rich, expects no aid:  
Content with her own Fruit she keeps her state,  
And flies the juices of a meaner Mate.

Yet this observ'd you may improve the kind,  
And to poor stocks, the richest Cion bind;  
As 'tis in Men, just so in Trees 'tis found,  
Propose but Fortune, they receive the Wound.  
The stock cleaves freely, and the *Adulterous* Root,  
Forgets her Shame, and glories in her Fruit.

To shallow Ground forbear to trust the Fruit,  
That Earth require, and downward thrust the Root:  
For rugged Pumice, or a scorching Clay,  
Will stop their Passage, and obstruct the way;  
A stiffen'd Marl resist, or Chalk deny  
The vital moisture, and the Plant will die:

# An Explication of the Terms of Gard'ning, in an Alphabetical Order.

A rocky ground avoid with equal care,  
That moisture wants, and is averſe to bear.  
The wither'd Trunks will ſtretch its Arms in vain,  
To dropping Clouds, and beg ſupplies from Rain.  
But Shrubs, and common Flowers that quickly ſhoot,  
Ask little Earth, nor fix a deeper root;  
On any Bed you may ſecurely plant,  
For Nature's kind, and will ſupply their want.  
On little Earth they are content to live,  
And crave no moiſture, but what Clouds can give.  
With various Beauties they adorn the Soil,  
Whiſt odorous Sweets reſreſh the Tiller's toil.

Obſerve theſe Rules, the ſtubborn'ſt ground will yield,  
And Flowers and Trees will crown the pooreſt field;  
Rich Orchards ariſe, and fruitfull Branches ſhoot,  
And Fields, once barren, wonder at their Fruit.

Thus learn'd *Quintinius* ſpoke, and more deſign'd,  
Diſcloſing the large treaſures of his mind;  
But *L——s* with officious cares oppreſs,  
Revolving Fates of Empires in his Breaſt,  
Thus ſaid, Enough, whiſt I for Arms prepare,  
And Victory, the Royal Gardens be thy care.

He ſaid, Enlarg'd *Quintinius* bow'd, and took  
A higher *Genius* from his awful look:

Scarce had he caſt enlivening Eyes a-round,  
But hatefull Barrenneſs forſook the Ground;  
Her long black Wings upon a Northern wind,  
She ſtrecht, nor left one blaſting damp behind.  
To *Lybia's* parcht inhospitable plains

She fled, and there in a vaſt Deſart reigns:  
Secure ſhe reigns, but lo the times ſhall come,  
I ſee them roul through the Abyſs of Doom,  
When our victorious Arms ſhall reach the *Moors*,  
And plant freſh *Lilies* on the barren ſhores.  
With new born grace the Fields began to ſmile,  
And felt his vigor ere he turn'd the ſoil:  
O happieſt Artiſt! Thou alone couldſt grace

The Royal Gardens, and exalt the place;  
Oblige great *L——s*, and thy Art alone  
Adorn thoſe Seats where he hath fixt his Throne.  
To thee her buſineſs Nature gladly yields,  
And ſits at Eaſe, whiſt Art improves the Fields.

Here Froſt and Snow in vain cold Winters bring,  
You break their Force, and make perpetual ſpring.  
In every ſeaſon foreign Fruits appear  
And various Flowers crown all the blooming year.  
Here groves and Foreſts riſe, here *Fawns* do ſport  
In ſhady Grotts, here *Sylvan Gods* reſort  
Secure from the mad tumults of the Court.

And hence the gay *Pomona* crown'd with flowers  
And fill'd with Fruit, enjoys *Verſalian* Bowers;  
With ſtately pace, and with a nobler port,  
Approaches *L——s*, and adorns his Court.

## A.

**T**O *Ablaqueate*, or lay bare the Roots  
of Trees. See Bare, and Trees and  
Roots.

*Acclivity* is the ſloping of the ſide of a  
Hill, or Bank, or Ridge, or any other  
Ground not level, conſidered as Riſing or  
Aſcending, which when conſidered as de-  
ſcending, is called *Declivity*. See *Declivi-*  
*ty*.

*Ados*, is a French Term ſignifying ſome-  
times a ſloping *Bank* rail'd againſt ſome  
well expoſed *Wall*, to ſow haſting or early  
*Peaſe* or *Beans* in, or plant *Artichokes*, or any  
thing elſe we would have more forward  
than ordinary, and ſometimes Ridges or  
Double Slopes, with Furrows or Drains be-  
tween them, to lay the Plants dry, in wet or  
marſhy, or over moiſt Grounds. See *Bank*,  
*Hillock* and *Slope*.

*Agriots*, in French, *Griots*, are a ſort of  
choice *Cherries*, of the ſharp ſort, ſuch as are  
our right *Kentish Cherries*.

*Alberge*, is a name given to *Peaſes*,  
that are but of a ſmall, or ſcarce middling  
Size.

To *Aline*, is to range, level, or lay even  
in, and to a ſtrait and direct Line. Said of  
Walls, Rows of Trees, and ſides of Banks,  
Allies, or Beds, which is performed with  
Lines faſtned to Spikes fixed in the Ground  
or Wall, as is amply deſcribed in its proper  
place. See to Range, to Level.

*Aliners*, are ſuch Rangers, or Men im-  
ployed in the aboveſaid work of Ranging,  
or Levelling Rows of Trees, Walls, &c. It  
were well our Engliſh Gard'ners would  
naturalize thoſe two Words, not being  
otherwiſe able to expreſs their ſignification  
without a Circumlocution, and having  
with leſs neceſſity naturalized many other  
foreign terms, without ſo much as alter-  
ing their Termination, in which theſe I  
have made perfectly Engliſh.

*Allies*, are ſuch as we call Walks in any  
Garden. See Walks, and their Uſe and  
Proportion, ſee in the Body of the Book.

*Allies*, are ſaid to be *Bien Trrées*, *Bien Re-*  
*paſſés*, or *Bien Reſtrées*, that is, well plain'd,  
when they are laid ſmooth and firm and  
tight again, with the beater or roul-  
ing Stone after they have been ſcraped or tur-  
ned up with an Inſtrument to deſtroy the  
Weeds.

*Diagonal Allies*. See *Diagonal*.

*Parallel Allies*. See *Parallel*.

To *Amend*, is to *Meliorate*, recruit, or  
improve any Ground that is either ex-  
hauſted by continual bearing, or that is natu-  
rally Barren, with *Dung*, *Man*, *Compoſt*,  
*Freſh Mold*, or any other uſual way of im-  
provement.

*Amendment*, is *Mucking*, *Dunging*, or any o-  
ther way recruiting or improving of Ground  
as aboveſaid.

*Amputation*, is the ſloping or cutting off,  
of any conſiderable Branch or Limbs of a  
Tree.

*Annual Plants* or *Flowers*, are ſuch as con-  
tinue but a Year.

*Ants*, *Piſmires*, or *Emetts*, are known  
*Inſects*.

*Approb*, to *Graſſy* *Approach*. See *Graſſing*  
and *Inoculation*, in the firſt part of this  
Work.

To *Apple* or *Pome*. See to *Pome*.

*Argos* or *Spurs*, are the pointed ends  
and extremities of dead Branches in any  
Trees, which no neat Gard'ner will neg-  
lect to cut off. But it is particularly ne-  
ceſſary to do it in Nurſeries for Trees graſ-  
ſed *Scutecheon-wiſe*. See *Spurs*.

*Arms* are the main Branches or Limbs of  
a Tree.

*Aromatick* Plants, are ſuch as are Spicy,  
and hot in Scent and Taſt, whether ſweet  
or no.

*Artichoke-Eyes* or *Eyelets*, are the *Off-ſets*  
growing about the main *Stool* or *Hearts*  
of *Artichoke* *Roots*, from which Spring the  
*Suckers* or *Slips* by which they are propa-  
gated.

*Artichokes* *Suckers* are of two ſorts, viz. *Head-*  
*ed Suckers*, that bear ſmall Heads, and  
ſhoot out of their ſtems round about their  
main *Heads*, but grow not ſo big, or *Suckers*  
which as is aboveſaid, ſpring from the *Off-*  
*ſets* of their Main *Roots*, called by the French,  
*Orillemes*, or *Eyelets*, which are therefore  
their *Slips* or *Slip-Suckers*.

*App*. See *Expoſure* and *Expoſition*.

*Avenues*, are certain Allies or Walks in  
Gardens larger than ordinary, but more  
properly leading to the front of the Houſes,  
which are commonly accompanied with  
two Bye-Walks, commonly call'd Coun-  
ter-Walks, which are both Bordered with  
great Trees, either *Elms*, *Linden Trees*, or  
*Oaks*, and ſometimes Scandard Fruit-Trees.

## The DICTIONARY.

*Aviary*, is a convenient place in a Garden, or Houſe where Birds are kept, to Sing, Breed, &c.

*Auguſted*, is a Term uſed to ſignifie any thing that is Sun burnt, and has endured the heat of the Summer, and is turned ripe and yellow like Corn in *Auguſt*, and hard and firm withall. It is ſpoken of ſeveral things, as of *Branches* of *Trees* that are of a full Summers growth, of *Melons*, *Pumpions*, &c. when they are grown yellow, and hard, and will endure the Nail.

To *Arreſt Melons* or *Cucumbers*, is to break off the top of their Vines, to check and ſtop their Growth. See *Melons*.

*Aterolls*, are *Garden-Haws*, being twice as big as the Wild ones, and much more Pulpy and Pleaſant, but not ſo fruitful; and conſequently, *Ateroll-Trees*, at *Garden-Haw-Trees*, which are uſually planted againſt *Walls*.

### B.

**B** *Acward Fruits* or *Legumes*, are ſuch as ripen late in the year. See *Latter*.

*Bands* of *Long Rie Straw*, ſteeped in water to make it lithe and pliant, and then twiſted, are made uſe of to tie up *Lang Lettices*, or other plants to cabbage, or whiten. Such *Straw* in *French* is called *Pleton*. See *Straw*.

*Plat-Bands*. See *Borders*; See likewiſe under *P*.

*Sloped Banks*, raiſed againſt *Walls* well expoſed, for the ſowing or planting of *Haſting* or *Early Peas*, *Beans*, *Artichokes*, &c. See *Ados* and *Slopes*.

To *Bank*, is to tight up the ſides of a *Bed* or *Border*, and make it firm with the back of a *Spade* or other Inſtrument.

To *Bare the Roots* of *Trees*, or to *Ablaqueate*, is to dig away the Earth about them, and expoſe them ſometime to the Air, to reſreſh them, and make room for putting freſh *Mold* to them, or in order to come at their *Roots*, to prune them, when either defective, or too Rank or Luxuriant. See *Trees* and *Roots*.

*Bark*, is the outward rind of a *Tree*.

To *Bark* a *Tree*, is to peel and ſtrip it of its *Bark*.

*Baskets* made of *Oxier* wrought ſo looſe, that one may ſee through them, are uſed for *Circumpoſition*, that is to plant young *Trees* in, to keep in reſerve, to be ready to take up again with *Basket* and all, to replant in the places of ſuch *Trees* as ſhall happen to die, or otherwiſe miſcarry, in the *Ranks* where we had planted them, that ſo there may be no *Gaps*, nor other Deformity in

any Rank of *Trees*. The *French* term them *Mannequins*.

To *Bear* eaſily or quickly, or eaſily or quickly to take to, or to be brought to bearing, is ſpoken of *Trees* that bear in few years, or little time after they are planted.

To *Bear* hardly, or to be hard to take, or to be brought to bearing, is ſpoken of *Trees* that are many years or a long time after planting, before they bear.

*Beaten*, ſpoken of tilled *Ground* when it is ſo beaten with great and violent *Rains*, that 'tis grown as firm as if it had been never tilled at all.

A *Beater* is an Inſtrument wherewith *Gravel Walks*, *Palt-malls*, &c. are ſmoothed and made firm.

*Beds* are plots of dreſſed *Ground*, which in digging, are wrought into ſuch a form by the *Gard'ner*, as is moſt convenient to the temper and ſituation of the Earth in that place, and to the nature of the Plants to be ſown or planted in it. They are of two ſorts, *Cold* and *Hot*.

*Cold Beds* are made either of *Natural Earth*, or mixed and improved *Mold*, and are in moiſt *Grounds* raiſed higher than the *Paths*, to keep them moderately dry, and in riſing and dry *Grounds*, laid lower than the *Paths*, that they may on the contrary retain moiſture ſo much the better, and profit ſo much the more by the *Rain* that falls.

*Hot Beds*, are *Beds* compoſed of *Long New Dung*, well packt together, to ſuch a height and breadth as is preſcribed in the *Body* of the *Book*, and then covered over to a certain thickneſs, with a well tempered *Mold*, in order to the planting or ſowing ſuch plants in them, as are capable of being by *Art*, forced to grow, and arrive to maturity even in the midſt of *Winter*, or at leaſt a conſiderable while before their natural *Season*.

How theſe *Beds* are differently made for *Mylbrooms*, and how for other *Plants*. See in the work it ſelf.

*Doſt Beds* are ſuch *Hot Beds* as are made hollow in the *Ground*, by taking away the natural Earth to ſuch a certain depth, and filling the place with *Dung*, and then covering it with *Mold*, till it riſe juſt even with the Surface of the *Ground*. They are uſed for *Mylbrooms*.

*Kernel Beds* are *Nurſery Beds*, wherein the *Seed* or *Kernels* of *Fruit* are ſown in order to raiſe *Stocks* to *Graft* upon.

*Bells*, are large *Glaſſes* made in the form of *Bells*, to clap over tender *Plants* or ſuch as are to be forced, to keep them from the *Cold*, and to communicate the *Sun's* heat to them.

## The DICTIONARY.

them ſometimes with the more advantage, when it is not ſtrong enough without them.

*Belles de Nuit*, or fair ones of the night, are a ſort of *Flowers*.

*Bigarros*, are a ſort of *French Heart Cherries*, ſo called becauſe they be partly *Red*, and partly *White*.

*Bigarredes*, are a ſort of *Sour Oranges* deep coloured, and in a manner crumpled, and with a very uneven *Rind*, uſed chiefly in *Sauces*, and to medicinal purpoſes. So called from their odd and uncouth ſhape.

*Bigarredes*, are a ſort of moſthey coloured *Pears*, called alſo the vilonous *Pears* of *Anjou*.

*Biting* is a taſte in *Fruits* and *Plants*, well known to any taſter.

*Le Blanc*, i. e. the *Whites*, is a ſort of diſeaſe in *Melons* and *Cucumbers*, termed only in *Engliſh* *Unhealthineſs*: See *Unhealthineſs*.

To *Blanch*: See to *Whiten*.

*Blaſt* and *Blaſting*, are ſaid of any young *Buds* or *Flowers*, or *Leaves* of *Plants*, that being nipt by the *East* or *North East Winds* ſometimes reigning in the *Spring*, wither and thrive, and fall off, to give place to new ones. The *Antibour's* counſel is to eaſe the *Plants*, by taking them ſpeedily off.

To *Bleed*, or *Weep* is ſaid of *Vines* whoſe ſap runs out to waſte by indiſcreet cutting or any other accident: See *weep*.

*Blighing* is ſaid of *Flowers* or *Bloſſoms*, that ſhed or fall without knitting for *Fruit*, by the effect of the ſame *Winds*.

To *Bloom* is ſaid of any *Plant* that begins to *Flower*.

*Bloſſomes* are well known to be the *Flowers* of *Fruit-Trees*.

*Bloſſoms* that ſhed without knitting for *Fruit*, are ſaid in *French* *Couler*, i. e. to ſlip, or ſlink like an *Abortive Birth*.

To *Blow*, is ſaid of *Flower Buds* when they open and ſpread.

*Borders* are *Flat Banks* raiſed againſt *Walls* commonly garniſh'd with *Sweet Scented Herbs*, as *Time*, *Sage*, *Lavender*, &c.

*Burdurs* or *Borders*, is a term likewiſe uſed for *Herbs* commonly planted in *Borders*.

*Counter-borders*, or *Plat Bands*, are ſuch *Borders* as are made on the ſides of *Walks* or *Squares* that front the *Borders* by *Walls*.

To *Border* an *Alley*, is to *Line* or *Edge* it with *Borders* that may ſeparate it from the *Squares*, and *Beds*, and other works contained in them, between which they *Traverſe*.

A *Botaniſt*, is one that is a profeſſment in the general knowledge of *Plants*.

A *Bottle* or *Truſs* of *Herbs* is a known Term.

*Boughs*: See *Branches*.

*Boxes*: See *Caſes*.

A *Branch* or *Bough* is a part of a *Tree*, that ſhooting from the *Trunk*, helps to form the *Head*. *Branches* are of ſeveral ſorts.

An *Auguſted Branch* is a *Branch* of a *Summers* growth, that is juſt hard'ned, and has done growing.

A *Bearing*, or *Fruit-Branch* is a young ſhoot that is grown of a middling length and thickneſs from the pruning of the foregoing year.

*Collateral Branches*, are ſuch *Branches* as grow and ſpread on the ſame ſide of a *Wall-Tree*.

A *Mother Branch*, is a *Branch* that after its laſt *Pruning*, has ſhot forth other new *Branches*; And thus we ſay, that in *Pruning* no young *Branches* are to be left upon the *Mother Branches*, but ſuch as contribute to the Beauty of the figure of the *Tree*.

*Main*, or whole *Branches* are called *Arms*, and *Limbs*.

*Branches Chifformes*. *Skubbed* or *Shrubbie Branches* are ſuch as are very ſmall and very ſhort or *Skubbed*, whether they be of but of one or more years growth, and becauſe they do but ſtuff a *Tree* with a confuſed quantity of unſeis *Leaves*, muſt therefore be taken clean away.

*Water Branches*, or *Water ſhoots*, or *Water Boughs*, are ſuch *Boughs* that on *Standards*, being ſhaded and dript upon, remain ſmooth and naked without *Buds* which are as I ſuppoſe thoſe which our *Antibour* calls *Jarrets* or *Hams*: See *Hams*.

A *Wood Branch*, is a *Branch* that ſpringing out of the laſt years *Pruning* in a regular and natural order, is reaſonably thick.

A half *Wood Branch*, or *Branch* of half *Wood*, is a *Branch* that being too ſmall for a *Wood Branch*, and two thick for a *Fruit Branch*, muſt be ſhortned to the length of two or three *Inches*, to make it produce other new ones that may be better either for *Wood*, or *Fruit*, and at the ſame time contribute to the Beauty of the figure, and to ſpend off and divert ſome of the over *Luxuriant* vigour of the *Tree*.

*Branches of Falſe Wood*, are ſuch as ſhoot from any other part of the *Tree* than that which was *Pruned*, laſt year; or eſe ſuch as though they ſpring from the laſt *Pruning*, are thick and gouty in thoſe places where they ſhould be ſlender.

The main *Running Branches* of *Melons* or *Cucumbers* are called *Vines*.

To break off. See *pinch*, and *Brou*, and *Brouſe*.

To break up. Is ſaid properly of plowing or digging up *Ground* that never was tilled before, or at leaſt not a long time.

To *Brouſe* or *Brou*, in *French*, *Brouter*, is to break off the extremities of ſmall *Branches*.

*ches*, when they are too long in proportion to their vigour.

*Brugions*: See *Nectarins*.

*Bruised Fruit*, that is, bruised in falling without piercing the skin, is called in *French* *Cottis*, or *Squatted*.

A *Bud* is the *Head* of a *Young shoot* that begins to peep out.

A *Young Bud* or *Eye*, is a *Bud* as 'twere in its first Seed and principles, when it just only appears in the *Bark* of the *Tree*, before it swells to peep or shoot forth.

To *Bud*, is to *Graft* by *Inoculation*, or set a young *Bud* of one *Tree* into another; an operation to be performed about *Midsummer*. See *Inoculate* and *Inoculation*, and *Grafting* in the fifth part of this *Work*.

*Well Budded* or *well set Trees*; is said of those *Fruit-Trees*, that have abundance of *Fruit Buds*, and the contrary of those that are not so.

A *Bucket* or *Tub* used by *Gardners* sometimes, to sow some choice particular Seeds in; they are made sometimes square or oblong, but most commonly round, and about the bigness of a *Barrel*. The *French* call them *Baquets*. See *Tubs*.

*Bulls* or *Bulbous Roots*, are all such *Roots* as are Roundish and Coat upon Coat like *Onions*, as those of *Garlick*, *Tulips*, &c. and are mostly propagated by *Off-sets*. And accordingly in *French* they are called by the general name of *Onions*.

*Mother Buds*, are those which produce *Off-sets*.

A *Bunch* is a common Term, as a *Bunch* of *Radishes*, *Turneps*, &c.

*Bunch* is also said of *Grapes* or any *Fruit* that produces several *Fruit* upon one stalk; as also of knots of *Wood*, &c.

*Burly-Trees* are said to be or grow *Burly*, when a *Graft* grows bigger than the stock it is *Grafted* upon, which is a sign the stock or wilding is not vigorous enough. The *French* term is *Burlet*.

*Bubo*, is said of some *Fruit Shrubs*, as a *Curran-Bush*, a *Goose-berry-Bush*, &c. Also the tops of *Dwarf-Trees* are said to be *Bushy*, when the *Branches* grow into a *Tuft*. *Bushel*. A *French-Bushel* is a measure containing near a peck and half *English*, or 20 pound weight.

To *Butt*: See *Hillock*.

A *Burton* is a round and turgid swelling *Bud* containing the *Blossoms* that produce the *Fruit* in any *Tree*; in *Kernal Fruit* every *Bud* contains several *Blossoms*, and in stone *Fruit* but one.

C.

**C**abbage a known Plant.

To *Cabbage* or *Pome*, is to curl or fold up into a round firm head like a *Cabbage*, or an *Apple*.

Thus not only *Cabbage* but *Lettuce* is said to *Cabbage* or *Pome*, and *Artichokes* are said to *Pome*: See *Pome*.

*Calebas* is a term used for *Plums* that in the Month of *May* instead of *Plumping* or preserving their *Green* grow broad, lank, and *Whitish*, and at last fall off without *Plumping* at all.

A *Canker* is a sort of *Scurf*, *Scabiness*, or dry Rot in *Trees*, which breeds both in the *Bark* and in the *Wood*, and most insects, the little *Muscat* and *Robins*, and *Bergamot Pear-Trees*, as well in their *Stems* or *Bodies*, as in their *Branches*.

*Capers* and *Capucin Capers*, see them described in the sixth part treating peculiarly of *Kitchen-Garden*.

*Caprons* are *Straw-berry* Plants that have large *Velvet* Leaves, and bear large *Whitish* *Straw-berries* which have but a faint taste, and are not very *Fruitful*, and therefore not much valued.

A *Carpet Walk* is a *Green Walk* of *Graft*, *Canomil*, or the like, kept neat and even with mowing and rolling: See *Walk*.

*Cases* or *Boxes* are conveniences made of *Wood* to plant some certain rare and tender Plants, as *Orange-Trees*, in &c. See *Boxes*.

To *Castrate* or *Geld*, is said of *Cutting* or *Pinching* of the superfluous shoots of *Melons*, *Cucumbers*, &c.

*Castings* of *Ponds* or *Ditches*. Is the slime or mud cast out of *Ponds* or *Ditches*, which after it has been a while exposed to the *Sun*, is profitably used to recruit, improve or amend, exhausted or lean Ground.

To *Chap*, is said of the Ground, or of any *Wood* or *Fruit* that cleaves and gapes by any cause whatsoever.

*Chalk*, and *Chalky Earth*: See *Earth*.

*Chaffis*: See *Claffi Frames*.

*Cherry-Gardens*, or *Cherry-Orchards*, or *Cherry-Plantations* are known terms. There are in *France*, some *Cherry-plantations* in the open fields, confining upon the *Vine-Tards*, of some miles extent; and the like there are of *Plums*, *Olives*, &c.

*Stock Cherry-Trees*, are *Cherry-Trees* sprung from the *Roots* of others which yet bears good *Cherries* without being *Grafted*.

*Chevreuses*, are *Hairy* or *Goat Peaches*, so called because they are *Hairy* like *Goats*. *Chevre* signifying a *Goat*.

*Chev-*

*Chevreuses*, are *Peaches* *Hairy* like *Goats*: See *Goat Peaches*.

*Chowons*, *Colly-flower* plant in *Flowers*.

*Cions*, or *Scions* are young slips, or suckers of any *Tree* fit to *Graft*: See *Scions*.

*Circumposon*: See *Baskets*.

A *Claff*, is a rank or order by which things are sorted and in which they are placed.

*Clams* or *Fangs*, called in *French* *Pattis*: See *Fangs*.

*Clay* or *Clay* Ground are terms well known see: *Earth*.

*Cleanse*, as to *Cleanse* a *Tree* of *Moss*, *Scab*, or *Canker*, *Gum*, *Rust*, *Vermis* and their *Eggs*, &c.

*Clear*, as to *Clear* a *Tree* of some of its superfluous *Branches* when they grow too thick, or of its useless suckers and *Cions*.

*Clefts*, to *Graft* in the *Cleft*. See it in the fifth part of the Book.

*Clod*, as a *Clod* of *Earth*, is called in *French* *Motte*.

To *Clofe*, a *Tree* that is *Grafted* is said to *Clofe* when the *Bark* grows over the cut where it was *Grafted* so that it appears smooth without a *Scar*; or when the *Bark* grows over and covers any other cut or wound in *Pruning*.

A *Clofe* cut: See *cut*.

*Cloves*, is a term used to signify the *Off-sets* of *Garlick*, and some other like *Roots*. See *Off-sets*.

*Clusters*, or *Bunch*.

To *Coffin* themselves, is said of *Flowers* that thrive up and dry away in their *Buds* without flowing or spreading.

*Compartment*: See *knots*.

*Compost*. Is rich made *Mold*, compounded with choice *Mold*, rotten *Dung*, and other enriching ingredients.

A *Conservatory* is a clofe place where *Orange-Trees*, and other tender Plants are placed till warm weather come in. See *Green house*.

A *Coronary Garden*, is a *Garden* planted with *Flowers* and other materials that compose *Necessary* and *Garlands*.

To *Conch*, is to bend a *Wall-Tree* for palisading, or to lay down layers to take *Root*.

*Counter Espaliers*, are *Pole Hedges*, or *Trees* growing in *Pole Hedges*, fronting the *Wall-Trees*, and spread, palisadoed, and *Trellised* like them. They are now almost out of use in *France*, but only for some sorts of *Garden Vines*.

*Corny* or *squatted* is said of bruised in falling, without cutting their skin.

*Coutilliere*, is a sort of insect, or *Palmer Word* bred in *Horfe Dung*, and consequently in *Hot Beds*, about two Inches long at full growth, pretty thick, and yellow-

ish; with many legs. It crawls very nimbly; and gnaws the *Roots* of *Melons*, *Succory*, &c. growing on *Hot Beds*. See *Insects*, and *Palmer*.

*Crop*, is a known word to signify the whole increase we gather from any thing, as a crop of *Corn*, &c.

To *Crop* also is to plant sow or furnish a *Ground* that is empty, &c.

To *Crop*, is to break or pinch of useless *Branches* without cutting.

To *Croft*, is said of *Branches* in *Wall-Trees*, that grow cross one another.

*Crown*, is used for the head or upper hollow extremity of *Kernal Fruit*. to *Graft* in the *Crown*: See *Graft* in the fifth part of the Book.

*Crumpling*, or *Guekins* are small *Cucumbers* to pickle, called in *French* *Cornichons*. They are also small crumpled *Apples*.

A *Cubical Tasse* or *Fathom*: See *Tasse*, and *Fathom*.

*Cuckwits*, are *Straw-berry* Plants that blow without bearing.

*Cucurbit Glasses* filled with honied *Beer* or water are hung upon *Wall-Trees*, to catch and destroy wasps and flies.

*Culture*, is the *Tillage* of *Ground*, or the whole care and labour that is taken for the *Tillage* of *Ground*, dressing of *Gardens*, or rearing, raising and improving of any particular Plant or *Fruit*.

A *Curtain*.

To *Cut*, and the several ways of it see in the *Treatise* of *Pruning*.

A *close Cut*, is a *Branch* of a *Vine* shortened to the length of 3 or 4 *Eyes*, or young *Buds*.

*Cuttings*, are ends of *Branches* cut off from some certain *Trees*, shrubs and Plants, which being set or planted, will take *Root* and grow.

*Cutwork*, are *Flower Plots*, or *Graft* plot consisting of several pieces cut into various pleasing figures answering one another, like cut work, made by *Women*.

D.

**D**elivety is the sloping of the side of a *Hill*, *Bank*, *Ridge*, or any *Ground* not *Level*, considered as *Falling*, or *Descending*, and is contrary to *Activity*, which see.

*Deaf Beds*: See *Beds*.

*Dented*, is spoken of any *Leaves* of *Trees* or *Plants*, that are dented.

*Devils Gold Ring*, in *French*, *Liffete*, a sort of a *Worm* or *Cater-pillar* infesting the young shoots of *Vines*.

*Diagonal Allies*, or *Lines*, are *Allies* or *Lines* drawn cross one another through the

the Center of each, and cross any square in a Garden from corner to corner, thereby to give them that walk in them the fuller view of the square.

*Diet.* See *Milk Diet*. *Feed, Refrefh.*

To *DIG* or delve, are terms known to all.

*Doughie.* Is said of the Pulp of fruit, as a *Doughie Pear*, a *Doughie Peach*, &c. See *Pulp*.

*Drains*, are *Dykes* or *Gutters* made in Grounds, to carry off the water: See *Dykes*, *Gutters*, *Water-courses*.

To *Dress*, Is said of the Tillage or Tighting up of a Garden, or any part of it. It is likewise said of the pruning and trimming of Trees. Thence we say, a Vine dresser, or to dress a Vine, &c.

*Dung*, is a known Term, and is long and new, or short and old. Long and new fresh Dung is Litter that has served Horses or Mules but one or two Nights at most, and has all its straw entire in it, and has not yet fermented, and much less rotted, old and short Dung, is Dung that has fermented and lost its heat, and whose Straw is rotted, and formed into a kind of Mold with the Dung.

*Dwarf Trees* are Low Standards, or Trees so dressed and pruned in Planting, as to have but low Trunks, and moderate, ly spreading Branches and Tops.

*Musty, Mouldy*, or Hoary Dung, is used for a *Musfroom Bed*: See *Beds Mouldy*, and *Musfrooms*.

*Dikes*: See *Drains*, *Gutters*, *Water-courses*.

## E

**E***mbroidery*, is a term used in Flower Gardens, signifying, Flower Plois that are wrought in fine shapes, like patterns of Embroidery.

*Ear-Wigs* are an Insect well known.

*Earth*, in Gardning, is taken for the Soil or Ground in which Trees Legumes, or Edible and useful Plants or their Seeds are to be sown or planted, and is of several sorts, as for example:

It is call'd *Sower*, *Bitter*, and *Stinking*, when in smelling to it, or taking the water in which it has soaked, we perceive it *Sour bitter* or *Stinking*.

It is called *White Clay*, when it is of a White stiff, and slimy substance, and is fat, heavy, gross and Cold, and cuts like Butter, and is very apt to chop with the Summers heat; and some call it dead Earth because of its unfruitfulness.

It is tilled good when we can make any thing grow in we have a mind to; And bad when neither Trees, Plants nor Seeds thrive in it.

It is called hot and burning, when it is so light and dry that upon the least heat, all the Plants in it dry away and wither.

It is called *Gravelled* when 'tis mixed with much sand and many little stones tempered with a little light Red Clay.

It is called *Tough*, heavy, and by some stubborn, and because of its unfruitfulness Chaff, and in England Red, Loamy stiff Clay, when it cuts smooth and stiff, and is very hard to Till or dress, because the great rains beat it all into a marsh like mortar, and the heat on the other side chops it, and makes it hard as a stone.

It is called strong, free, or rank Earth, when without being stiff and Clayie, it is like the bottom or mould under the turf, of good meadow Ground, and in handling, sticks to the fingers like a palte, and receives any shape or impression from them, whether long, round, &c.

It is termed Cold, moist, and backward when upon the advance of the Spring it is long before it conceives heat enough to put forth its productions, and brings forth every thing later than other places.

It is called forward, or hasty, when Fruits ripen in it betimes; as at St. Germain Paris, St. Maur, &c. and backward when it has a contrary effect.

It is called loose, light and mellow, when either by art or nature it is brought to a middling consistence, that is, loose and light like sand, and yet partaking of the heat and substance of good mould, easily obeying the spade, rake and other instruments, and penetrable to Seeds and the shoots and Fibrous Roots of Plants and Trees.

It is called new or fresh when it never served yet to the production of any Plant, such as is found two or three foot or more in depth below the surface or upper crust of the Ground.

It is called made or transported Earth when 'tis brought into the Garden from some other place.

It is called Fallow Ground when 'tis laid to rest a year or two or more, without being planted or sown with any thing. See *hollow*.

It is called over wrought or exhausted Ground, when it has been a long time continually tilled, sown and Planted without intermission, and without any recruit or amendment.

Lately it is called light and sandy when without having any body of true Earth, its parts do not stick together, no not with the Rain it self, but are so loose, that no plants can take hold enough to fix any Root there.

*Mould*

*Mould* is transported Earth, and is either Natural or Artificial.

*Natural Mould*, is pure choice well tempered Earth, taken from the bottom or under pasture of a Meadow, or other place where the Earth is naturally rank and mellow, or made out of the castings of Ditches or Ponds, well dried, sunned, and dressed, &c.

*Artificial Mould*, is Earth composed of rotten Dung, natural Mold, rotted Leaves of Trees, and other proper fubsting and enriching Materials. See *Compost*.

To *Earth up*, is to bank or hillock up the Earth about *Celery*, *Endive*, *Long Lettuce*, *Chards*, &c. almost to their Tops, to whiten them.

*Edgings*, are the edges of Borders or Beds which are garnished with Sweet Flowers or Herbs.

*Espaliers*, are *Wall-trees*, or any Trellised, or pallisado'd Tree.

*Eftilers*.

*Ever Greens* are such Plants, whose Leaves are always Green, as *Bays*, *Lawrel*, *Holly*, &c.

*Exhausted*. See *Earth*.

*Exotics*, are Foreign Plants brought from beyond the Seas, and that do not naturally grow in our Climates.

*Exposition*, *Exposure* and *Aspect*, signifie the same thing, and denotes the posture or situation any Wall, or plant is in, in order to receive the Benefit of the Rays, and influence of the Sun. And is fourfold, viz. *Northern*, *Southern*, *Eastern*, *Western*.

The Good *Expositions*, are those of the East and South, whereof the South is the best.

The Bad *Exposition* is that of the North.

The *Middling* or *Indifferent Exposition*, is that of the West. See them all described in the Body of the Work.

*Eye*, a young Bud just appearing in the Bark of a Tree. Is called an *Eye*. See *Bud*.

The *Crown*, or higher extremity of any *Kjmel Fruit*, is likewise termed an *Eye*.

## F

**F***aggots*, is the brushy or small part in the middle of a Faggot, laid at the bottom of Cases for *Orange-Trees*, to keep the Earth loose, and let the moisture pass.

*Fall*, the falling or sloping of any piece of Ground downward, is called Declivity. Which See.

*Fallow Earth* or *Ground*, is *Ground* laid to rest, and only tilled, mucked, and amended, without sowing or planting any thing in for a certain time till it be recruited. See *Earth*.

*Falfe Flowers* or *Blossoms*, are those Flowers or Blossoms of *Cucumbers*, *Melons*, &c. that do not knit, or set for Fruit, but fall off without producing any thing.

*Falfe Wood*. See *Branches*.

*Fangs*, is a term signifying the Claws of *Ranunculus*, and such like Roots, with which they take hold in the Ground. See *Claws*.

To *Fan* or *Skeen* Corn or Seeds, is a well known Term.

*Fane*, is a French Term, the top or leafy part, properly of such Plants whose Leafs are only or mostly in use, as of *Radishes*, *Turneps*, &c. being that part of them, as the word imports, that is, subject to fade and wither. It is called in English, sometimes *Foliage*. See *Foliage*, *Top*, *Leaves*.

A *Fathom* is a measure of six Foot, called in French, a *Toise*, and is a Term much used by this Author. See *Toise*.

*Feed* as to feed Vines with Blood, and other nourishing and refreshing mixtures.

*Fibres* are small long Roots like Hairs, that spring out of the larger Roots of Trees.

To *Fill* or *Quit*, is said of Fruit when it begins to Plump. See *Quit* and *Plump*.

*Fine*, as *Root*, or *Arrosee* fine, are gentle waterings.

*Fleas* are a sort of black Vermine, that hang upon and spoil Plants, called *Pucerons* in French, from their likeness to other Fleas.

*Flavour*, is a grateful salt, mixed with a fragrant smell, as in some Wine and Fruit, when we say they have a fine Flavour.

To *Fill*, or *Quit*, is said of Fruit when it begins to Plump. See *Quit* and *Plump*.

A *Florist*, is a Gard'ner that cultivates Flowers, or any other Person that understands and delights in the same.

*Foliage* is the leafy part of a Tree or other Plant, or a great quantity of Leaves.

*Forest-Trees* are such Trees as bear no Fruit, but are planted only for Yards, Avenues, &c.

*Fork* and to *Fork* the Earth, &c. are Terms that need no Explanation.

*Forward Fruits*, *Plants* or *Legumes*, are such as ripen or grow fit to be eaten, betimes in the Year. See *Hastings*.

To *Force*, is to advance things to Maturity upon Hot-beds before their natural Season.

*Fotherd Grounds*, is ground upon which Cattel are fed upon in Winter, with Hay, &c. to better it.

A *Free-stock*, as *Free-stock* upon *Free-stock*, is a Graff upon a Wilding, or a Graff of a Wilding upon a Wilding. See *Stock*.

*Frost-bitten*, is said of Blossoms, Buds, Shoots, Fruits, or any Edible plants, that

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are killed, or otherwise spoiled with the Frost.

A *Fruit-loft*, Garner, Room, Store-house, or Magazine, is a place where Fruit is laid up.

*Kernel-Fruit*, is Fruit that comes of Kernels or Seeds, as Apples, Pears, Quinces.

*Stone Fruit*, is Fruit that comes of, and contains Stones, or hard Shells inclosing their Seed, growing within the pulp of the Fruit, as *Peaches*, *Plums*, &c.

*Furnitures*, are all hot and spicy Herbs, mixed with *Lettuce*, *Purslain*, and other cold Herbs in *Salads* to temper and relish them, as *Rocket*, *Tarragon*, *Basil*, &c.

To fold in, is said of Leaves of decayed or blasted Plants that shrink, wither, and curl up together on a heap.

The *Foot* of a Tree is that swelling part of a Tree between the Body or Trunk, and the Roots of the Trees that are covered in the Earth. It is sometimes called in *French*, the Neck of a Tree.

### G.

A *Gage* is a Hole or Trench dug to plant a Tree in, of a certain depth, which serves a measure for all the rest in the same row.

*Gardens* are choice inclosed pieces of Ground planted with Edible Plants, Fruit-Trees, and Flowers, and differ from Orchards, which are commonly planted with Standard Fruit-Trees, and are seldom walled, or so curiously inclosed as Gardens.

*Kitchen-Gardens* are chiefly for *Kitchen* and Edible Plants.

*Fruit Gardens* for Fruits.

And *Flower-Gardens* or *Patterres*, for Flowers.

*Marsh*, or *Market Gardeners*, are such as frequent the Markets. See *Botanists* and *Blorists*.

*Nursery-Gardens*. See *Nurseries*.

To *Garnish* well, is said of Wall, or any palisaded Trees, when they spread well, and cover the Wall or Trellis on all sides, without leaving any place bald or bare.

*Glass-Frames* or *Classis*.

*Goat-Peaches* are Peaches that are very hairy. See *Chenueuses*.

A *Graft*, a young *Cion*, shoot, bud, or sucker set into another Tree or stock.

To *Graft*, see the several ways of doing it in the fifth part of the Book.

A *Grafting Knife*, is a known instrument to cut withal in order to *Grafting*.

*Gravel*, is a thing well known, see *Earth*.

A *Green-house*, is a Room or House framed with Conveniences for the houting and sheltering of *Orange-Trees* and other tender foreign plants, from the cold in Winter time, and cool Weather.

*Gritty*, sticky, or stony, is said of *Pears*, whose Pulp is hard, or harsh near the Core, or all over.

To *Grub*, as to grub up Weeds by the Roots, is a word known of Signification.

*Gutters*, Gutters are little Channels or Dykes that serve for Drains or Water-Courses, to carry off the water in moist marshy Grounds, and keep it dry. Sometimes they are paved and made up with Stone.

### H.

*Half Standards*, are Trees whose Trunks are shortened in planting to a middling length, between *High Standards* and *Dwarfs* or *Low Standards*.

*Hann*, is said of a Branch of a Tree very long, and bare of any other Branches, either by Nature, or by the Gardners ignorance in cutting them off, which Hams must be cut pretty close off, to make them shoot out new Sprouts.

*Hastings* or *Hastings*, is spoken of Fruits, *Salads*, *Legumes*, that ripen or come to perfection betimes in the Year, as *Hastings*, *Pear*, *Beans*, *Artichokes*, *Cherries*, &c. See *Forward*.

The head or top of a Tree, is known to all what it is.

To *Head* a Tree, is to cut off the Head or Top, leaving only the bare Stem without any Top Branches.

To *Heat*, as to heat Beds or Paths with new Long Dung, in order to force on and advance *Salads* and Fruits before the natural time.

*Haugh*: See *Haugh*.

*Hedges*, Besides common Hedges, there are Hedges made of Straw or Reeds to shelter tender Plants against the cold Winters, call'd in *French*, *Brise-Vents*.

*Pole Hedges*, are *Hedges* composed of palisaded Trees spread and fastned to Lattice frames and Trellises: See *Counter Espaliers* or *Counter Wall-Trees*.

The Heel of a Branch is the grosser and thicker bending part of a Branch that is cut off, which is Grafted into a stock when the other end is too small and weak.

The Heel or stool of an *Artichoke* slip, is that end that joins to the main Root.

*Herbalist* or *Herborist*, is one that understands or sells *Herbs* and Plants.

*Hillocks* are little Hills or round Banks raised about the feet of Trees or other Plants, as *Vines*, *Hops*, *Artichokes*, &c. as also about such plants as are earthed up to be whitened.

To *Hillock* is to raise such rounds Banks or *Hillocks* about any plant as are above described.

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scribed Hoary Dung: See *Muddy Dung*, and *Mugbroom*.

*Hortolage*: See *Pottery*.

*Hot Beds*: See *Beds*.

*Hough* or *Haugh*, is an instrument well known to *Gardners*, and most Country people, as likewise the action of using it.

### I.

To *Inarch*, to Graft by approach: See in the Treatise of Grafting. part 5.

To *Incase*, is to put curious tender, or Exotick Plants into Boxes or Cases, for their more advantageous Culture and preservation.

To *Innoculate* or *Bud*: See in the Treatise of Grafting. part 5.

Increase, a Tree or plant is said to be of great Increase, when they yield plenty of Fruit, or a good crop of any thing else, as grain, pulse, &c.

*Insects*, are all little animals whose bodies are divided by several cuts as 'twere and features.

*Mother Insects*.

*Infuscation*, or *Manganisin*.

To *Inter* or Replant, is to set *Onions*, *Tulips*, or any *Boulbous* Roots into the Earth again, after they have been taken up all the dead of the *Winter*.

### K.

A *Kitchen* or *Olitory-Garden*, is a Garden chiefly made for *Kitchen* or *Olitory* Plants.

*Kitchen* or *Olitory* Plants are all Plants that are usually Eaten, and used in the *Kitchen*: See *Olitory*.

*Kernels* are the Seeds of *Apples*, *Pears*, and *Quinces*, which from them are called *Kernel-Fruit* in Contradistinction to such as come of stones, as *Plums*, *Peaches*, &c. call'd Stone Fruit.

*Kernel Beds*: See *Beds*.

To *Knit*, or set for Fruit, said of Trees and Plants, or their Blossoms, when they begin to form their Fruit.

The *Knop* of a Flower, is the head case or cup wherein a Flower is contained whilst in Bud.

*Knotty* said of Trees that are rugged and full of knobs.

*Garden knots*, are *Flower-Plots*, or *Platts*, and Beds of Flowers formed into curious intricate, fanciful, and delightful figures, to please the Eye, but seen from some Eminent terret or room.

### L.

After Fruits or Legumes, are such as ripen late in the year.

To lay, or Couch, is to lay down and cover some part of the lower part of the suckers of some certain plants and Trees or shrubs in the Earth to make them take Root in order to be slipped off, and Replanted.

*Layers* are such suckers, as are so laid and couched.

*Lattices*, are the square works in wooden frames or Trellises that support Wall or palisaded Trees.

Seed Leaves, are the first Leaves that Spring up like ears on each side, at the first cleaving or sprouting of any Seed.

*Legumes*, are properly such as we call Pulse, as *Pears*, *Beans*, &c. But this Author often uses the word for all esculent or edible *Kitchen* plants.

A *Level*, is an even piece of Ground, without any slope either rising or falling.

A *Level* slope, is a slope that rises or falls so gently and evenly, that it is hardly discernible from a plain, or true level. It is called in *French* *Micote*, and when made so in digging, a *Talus*.

*Light Earth*: See *Earth*.

*Limbs*, the main Branches of a Tree are called its *Limbs*.

*Loam*, and *Loamy Earth*: See *Earth*.

*Litter* is such Straw as is used to little *Hofes* with which has not yet been used, or converted into Dung.

*Loose Earth*: See *Earth*.

*Litter Counter Walls*.

### M.

*Malacotoons*, are *Peaches* which are clothed with a *Cotton* like Down.

*Manganisin*, is an Art used by some by the infusion of certain injuries or tinctures of several Colours, or tastes, infused into the Roots or stems of Plants, and chiefly Flowers or Fruits, the same taste or Colour. Which knowing *Author's* condemn as vain.

*Mare*, is that which remains of the *Grape* after they are pressed, it is also used to signify, the Gritte, stony or Earthy part of a *Pear* or any Fruit that resists and disoblige both the Teeth and taste in Eating.

*Markes* or *March Gardners*: See *Gardners*.

*Marl* is a sort of Chalkie and faulty substance used to warm and amend lands that are cold and moist.

[b]

*Mattis*,

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*Matts*, and *Mattraſſes* are uſed to cover Plants with from the Cold.

*Melons*, and *Muskmelons*, are known *Fruits*.

Their main *Branches* are called *Vines*, to break of the tops of which *Vines*, is called checking or ſtopping them, and by the *French*, to arreſt *Melons*, &c.

*Minute*, a gently riſing and falling Ground hardly to be diſcerned from a level.

*Mellow Earth*: See *Earth*.

*Mildew*, is a ſort of Honey dew, that falling upon Plants, blaſts, rots and ſpoils them.

*Milk Diet*, is *Milk* diluted or mix'd with water and diſcreetly let down to the Roots of *Orange-Trees*, or other like tender *Exoticks*, and for curious Plants, to reſreſh and recover them when ſick, by letting it gently drop out of the Veſſel by a rag laid partly in the *Milk* and part of it out.

*Mother Inſects*: See *Inſects*.

*Mother Branches*: See *Branches*.

*Move*, as to *Move*, ſtir, turn up, and new drefs or turn up the *Earth* in any Place.

*Musk*.

*Mural-Trees*, are *Wall-Trees*.

*Musked*, thoſe *Fruits* are ſaid to be *Musked* that have a rich ſpicy or winy taſte, and leave a ſmell of perfume in the Mouth, and ſmell well.

*Muſhrooms*, are certain fungous or ſpongy excreſcences of the *Earth*, which are now highly prized in *Sauces*.

*Muſhy*, or *Mouldy* Dung that is ſo *Muſhy* that it begins to grow all Hairy with *Hoarſineſs*, is then fit to uſe to make *Hot Beds* for *Muſhrooms*: See *Beds*, *Dung*, *Muſhy*, and *Hoary*.

### N.

To Nail up a *Wall-Tree*, is to faſten well its *Branches* and paliſade and Trelliſe it as it ſhould be to keep it tight, and in due ſhape and figure.

The neck of a *Tree*. See *foot*.

*Nectarins* called alſo *Brignons* are ſmooth ſkin'd *Peaches* that cleave to their ſtones.

To nip: See to pinch.

*Novelties* of the *Spring*, are ſuch things as are forced to a maturity upon *Hot Beds*, a conſiderable while before their natural time of ripening.

*Nurſery Gardens* or *Seminaries*, are *Gardens* planted only with ſeedling or other ſtocks to Graff on, or young *Trees* ready Graffed, in order to have them ready to tranſplant in other *Gardens* as occaſion ſhall require.

*Nurſery Beds* or *Seminary Beds*, are *Beds* where young plants, or *Herbs* are ſown or

planted, in order to be tranſplanted afterwards elſewhere.

### O.

*Of-Settate* young kernell/ Excreſcences breeding from the ſides of the lower part of Boulbous Roots, which are round without and concave within, which in time grow to be Bulbs themſelves, and ſerve for their propagation. In *Gaulick* they are called *Cloves*.

*Onions* is a common term in *French* for all Boulbous Roots.

*Odoriſerous* is ſaid of all ſweet ſcented plants, *Flowers*, or *Fruits*. In *Fruits* this quality is termed by the *French* *Musked*, or *Perfumed*.

*Orangerſt*, is a *Gardner* that cultivates *Oranges*, or any perſon that underſtands and delights in the Culture of them.

*Orangery* is a place ſtocked with *Orange Trees*, whether within doors or without.

*Orchards*, or *Hot-yards* *Ort-yards*, are incloſed pieces of Ground planted chiefly with *Standards Fruit-Trees*, and more often fenced with *Hedges*, or *Ditches*, and other fences than with *Walls*.

### P.

*Panach's*, is ſaid of a *Trumpet*, *Carnation* or ſuch like *Flower* when they are curiouſly ſtriped, and diversified with ſeveral Colours like a gaudy *Plume* of *Feathers*, which the word properly ſignifies.

To *Paliſade*, is to bend, ſpread, and couch *Trees* upon *Trails* or *Trelliſſes*, or againſt *Walls*, whence *Trees* are named *Paliſaded Trees*.

*Paradiſe Apples*, are a ſort of ſweet *Apple*, growing on ſmall *Trees* very fit for ſome purpoſes of Graffing.

To Graff upon *Paradiſe*, is to Graff upon the ſtocks of ſuch *Trees*.

*Parallel Allies*, are *Allies* of an equal breadth through their whole length, and running along in lines equally diſtant all along from the lines that compoſe the ſides of the *Allies* which anſwer them.

*Parterres*, are *Flower Gardens*, or *Flower plots* in ſuch *Gardens*.

Under *Pasture*, is *Earth* or mold taken up from under the Turf of good *Meadow* or *Pasture* Ground, to carry into *Gardens*, to mend or recruit the Soil.

*Pawies*, are *Peaches* that ſtick faſt to their *Stones*.

*Peaches*, In a ſtrict Sence in this Author, are ſuch only as looſen from their *Stones*.

*Stone Peaches* are *Peaches* growing on a *Tree*, ſprung from a *Stone* without grafting.

To

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To Peg down, is to fix down the *Layers* of any *Plants*, to make them firm that they may take Root the better.

*Perfumed* or *Musked*, is that which has a ſpicy taſt, mixed with a ſmell both of the taſt and ſmell of *Musk*, or ſome ſuch like perfume.

To *Perch*, is to incloſe *Trees* or *Plants* with fences made with poles or perches laid croſs one another, to keep off *Beaſts* and *Boys*.

*Perennial*: See *Ever-green*.

*Pickets*: See *Spikes*.

To *Pinch*. See in the *Treatiſe* of *Pruning*.

The *Pith*, is the ſappy part of the *Wood* of a *Tree*.

*Plain* or *pure*, is ſaid of a *Flower* that is but of one colour, without being panach'd or ſtriped: See *Pure*.

To *Plant* or *Set*, is a *Term* uſed in *Contra-diſtinction* to ſowing.

A *Plant* Merchant or *Herboriſt*, is a *Term* ſufficiently known.

A *Plantation*, is a piece of Ground ſtocked with plants of any ſort, or of many kinds.

A *Plot*, as a *Gardner*: *Plot*, is a piece of Ground modell'd out ready for planting, according to the deſign of the *Plantation*.

To *Pump* or fill, is ſaid of *Fruits* when they begin to grow bulky, and towards ripening.

To *Pome* or *Apple*, is ſaid of the Heads of *Artichokes* when they grow round, and full ſhaped as an *Apple*. It is ſaid alſo of *Lettuce*, &c.

*Pomace*, is the maſh which remains of preſſed *Apples*, after the *Sider* is made, uſed for producing of *Seedling Stocks* in *Nurſery Gardens*.

To *Pot*, is to put or ſow any *Seed* or *Plant* that is tender or curious into a *Pot*, for its better and ſafer *Cultivation*.

*Potagery*, is a *Term* ſignifying all ſorts of *Herbs* or *Kitchen-plants*, and all that concerns them, conſidered in general.

*Pot-Herbs*, are always uſed in the *Pot* or *Kitchen*.

*Powder*, is the dried *Powder* of *Occidental Civet*, otherwiſe called human *Dung*, uſed by ſome to the *Roots* of *Orange-Trees*, but condemned by the *Author*.

To *Prick*, is to pull up young *Seedlings*, where they grow too cloſe and thick in the *Nurſery Beds*, and prick them into other *Beds* at more diſtance.

To *Prop*, is to prop up any *Plants* with *Perches*, forked *Sticks*, or *Poles*, ſuch as *Hops*, *Vines*, *Pears*, *French-Beans*, &c.

To *Prime*, and its ſeveral ways. See in the *Treatiſe* of *Pruning*.

*Pulp*, is the inward *Subſtance* or *ſheſhy* part of any *Fruit*, of which there are ſeveral ſorts, as *Buttred* and melting *Pulp*, is that which is melting and ſweet in the Mouth, like *Butter*, ſuch as is that of the *Butter-pear*, *Bergamot*, &c.

*Short Pulp*, is that which breaks ſhort in eating, ſuch as is that of *Pears*, that are firm without being hard, and that crackle between the Teeth in eating.

It is called tough harſh and hard in certain *Pear*, that have nothing of fine or delicate, as in *Catillac's*, *Double-flowers*, &c.

It is called *Mealy*, when it eats dry and mealy, as in over ripe *Dean-pears*, *Cadet-pears*, &c.

It is called *Doughy*, when it is fatiſh and diſagreeably ſoft like *Dough*, as in white *Butter-pears*, *Langſet* that grow in the ſhade.

It is called *Tender*, in certain *Pears*, that though they be neither melting nor ſhort, yet are tender and excellent, without being ſoft, fatty, or otherwiſe diſtaſtful, as in unknown *Chabaneau Vine Pears*.

Laſtly, ſome *Pears* have ſower taſte, as the *St. Germain Pears*, and ſome ſharp and biting as the *Craſſans*.

A *Punaſc* or *Bug* is a ſort of a *ſyke* that preys upon *Plants*, as the ſtinking *Bugs* of the ſame Name do *Human Bodies*.

*Pure*. See *Plain*.

### Q.

*Quince Stocks*, that are ſmooth, ſtrait, vigorous, and fit to graff upon, the *Author* calls *Coignaffers*, and thoſe that are rough, knotty and ſkrubbed and unfit, he calls *Coigniers*. But he believes them not *Male* and *Female*, according to the vulgar *Fancy*. Of theſe the *Portugal* are beſt.

### R.

*Rake*, a *Gardners Rake* whether of *Wood* or *Iron*, is well enough known, and the action of uſing it.

*Rame* and *Ramberge*, are terms uſed of *Melons*, when inſtead of a pleaſant, they have a ſtinking and filthy taſte contracted from the neighbourhood of ſome ſtinking *Weeds*, or being too near the *Dung*, the ſame happens to haſty *Alparagus* from the *Hot Bed*.

To *Range*, is to place in good order, or plant even in a *Line*.

*Rank Earth*: See *Earth*.

*Random Plants*, are ſuch as having been ſmothered, and deprived too much of *Light* and *Air*, or oppreſſed with any weight, grow white ſmall Cur'd and crooked, and ſlim, like ſuch we find under great *Stones* or *Logs* when we take them up. See *Eſtioler*.

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To

# The DICTIONARY.

To *Recreate*, is to turn up Ground, and recruit it with some heartening and fattening Mold or Mixtures, and convenient waterings, &c.

Red Winds, are the dry and blasting North East Winds, that Reign in March and April.

To *Refresh*, is said in two Senses, viz First, Trees are refreshed by Abolvement i. e. by laying their Roots bare, and retrenching their decayed and superfluous Roots, and recruiting them with good fresh Earth, or well tempered Mould, or by turning up side down, and well dressing and stirring the old Earth.

Secondly, To *Refresh*, is likewise to water Trees or Plants, as also to feed them, and diet them with Water diluted with Milk, or well tinged with Dung, or other rich ingredients, or with Blood, or other fattening and nourishing things, when they are Sick.

To *Refresh*: See *Unbind*.

*Retrench*.

*Rye-Straw*, being long firm, and steep in Water to make it pliable, is used to make Bands to tie up *Lettuce* or *Celery*, &c. to whiten, or wads to wrap about them, or covers to cover them or other Plants, and some tender Trees in Winter. See *Straw*.

A *Ridge*, is a double Slope between two Furrows, in any digged or plowed Land: See *Slope*.

*Roses*, or *Arrotes* fine, are gentle waterings.

*Rosine*, is a Name for all *Yellow Peach*-es.

*Roots*, such Plants whose Roots are most in use, are called often simply by that Name, as *Carrots*, *Turneps*, &c.

*Rub*, as to rub of superfluous Buds. See it in the Treatise of Pruning.

*Rust*, is the effect of Blasting or Mildew.

## S.

THE *Salt* of the Earth so called in Gardning Terms, is a certain Spirit which renders it Fertile, supposed to be communicated by the rays of the Sun tempered with the nitrous parts off the Air and Dew.

*Sand*, and *Sandy Earth*. See *Earth*.

*Sap*, is the radical moisture or Juice that nourishes a Plant.

*Saped*, see *Sobbed*, is any thing that is too much soaked in Water.

*Scar*, is a gash which remains after the cutting or pruning of a Tree.

To *Scrape*, as to scrape off Moss, Spawn or Eggs of Vermine &c. needs no Explication.

*Scions*: See *Cions*.

A *Scoop*, to scoop out Water, and the use of it are things well known.

*Screens* or *Shreens*, are inventions made of Straw or other Matter, to shelter Plants.

*Scutcheon*, or *Escutcheon*, a Term of Grafting. See it explained in the Treatise of Grafting part.

*Season*, a thing is said to be in Season while it continues fit to eat.

*Seedlings*, are little young Plants, sprung from Seeds or Kernels, in order to form Stocks fit to graft on. Thus we say, an Apple Seedling, a Seedling *Orange-Tree*.

*Seed-Leaves*: See *Leaves*.

*Seminaries* are Nursery Beds, or Gardens See *Nursery*.

To *Set*, is to plant with the Hand as distinguishing from sowing.

*Well Set*, or *Budded*. See *Budded*.

To *Settle*, is the linking of the Earth, in order to grow firm, after digging or plowing, or otherwise tilling, or of a *Hoe Bed* after its great and first heat is past.

To *Sever*, is to sever that end of any young Graft that is grafted by Inarching, or a approach from the Stock on which it grew, when the other end of it has taken good hold and footing in the Stock, into which it was grafted. 'Tis said also of rooted Layers when split off, from their old Stock.

To *Shed*, Fruit Trees are said to shed their Flowers or Blossoms, when blasted or nipt by Winds or Frosts, they fall off without producing Fruit.

To *Shoot*, is the same as to spring or sprout out.

*Shoots*, are such young Branches as shoot out every year.

To *Shrivel* or *Fold*, is said of *Leaves* Blasted, or dying Trees or Plants.

*Shrubs*, are small kind of Trees, of a midling sort between Trees and Herbs.

*Slips*, are Suckers split off from any Trees or Plants, to set again, to propagate them.

To *Smooth*, is to pare or cut even a large Bough with a pruning Knife, after it is sawed off.

*Smur*, is the Blacking or Smutting of Corn or other Plants, that happens to them in some Years.

*Snivel* called *Morve*, is a sort of rotting moisture, hanging about some Plants.

*Spicy*, is said of all hot scented and tasted Plants.

*Spikes* are separated Sticks, fixed on the sides of Beds, or in Rows where Trees are to be planted, to guide the Eye to keep them in a direct Line.

*Spindles* are those stalks in stocks or Tufts of

# The DICTIONARY.

of Carnations or Clove-gilliflowers, that bear the Flowers.

*Spit*, is the depth a Spade pierces into the Ground, as one Spit deep, two Spit deep, &c.

*Sprigs*, are small young Shoots.

*Sprouts*, are young green Shoots.

A *Stalk* is said of that part that bears any Fruit immediately, and tacks it to, the Branch on which it grows. It is also the stem of any Plant or Herb that is not a Tree or Shrub.

*Standards* are tall Bodied Trees, growing in open Ground.

*Stake*.

*Squatted*. See *Cotty*.

*Stem*, is the Body of a Tree, between the Foot and the Head.

*Stick*, is said properly of a strait Stem, that runs up high and upright all the way without any Branches, till just at the top.

*Sticky* or *Stringy*, is said of Roots, when not kindly or running to Seed.

*Stiff*, is said of some Earth. See *Earth*.

To *stir*, or *stir* up, is gently to move the Earth without digging or plowing it; though sometimes it be used for any sort of Tillage.

A *stock*, is the stem or Body of a Tree upon which after due trimming and preparation the Graft, or Cion of another Tree is Grafted.

To *top*, is by pinching, breaking, cutting, or treading the Branches or main stalks of Trees or other plants, the sap is checked or stopped from mounting upwards, or at least strait forwards.

*Stool*, the crooked bottom part of an *Archiebake* slip by which it is fastened to the main Root, is called its stool.

To *strike* Root, Any new planted Tree, layer, slip, or cutting is said to strike Root, when it begins first to take Root, or at least take new Root, after its planting.

To *strip*, is to despoil a Tree of its Leaves Fruit, bark, or Branches that form not the Head.

*Striped* is said of Flowers diversified with streaks of several Colours, as *Tulips*, *Carnations*, &c.

To *string*, as to string *Straw-berry* plants is to clear them of their superfluous strings and runners.

Strings: See *Sticky*.

A *stone*, is the Seed of any Fruit, which is enclosed in a woody shell hard like a stone, which from thence is called *stone Fruit*, as *Plums*, *Peaches*, &c.

A *stone Peach*, is a *Peach* growing upon a Tree sprung from a stone without Grafting.

*Stub*.

*Stump*, is the Trunk or stock of a Tree cut down very low, or a Branch cut very close.

To cut or *Prune* stump wife: See it in the Treatise of Grafting Pruning.

Surface and superficies, is the outward or upper crust of the Earth.

Surface Earth, is that Earth or mold that is uppermost, and exposed to the Air.

*Suckers*, are young Cions or slips commonly growing from the sides of the Roots, or else of the main joints of any plant or Tree, fit to be split off, and planted or Grafted.

Sweet Herbs, are such as the French call *line Herbs*, as *Rosemary*, *Marjoram*, &c.

## T.

A *Tendril*, is a young tender shoot of a Vine or other Fruit-Tree that is not yet hardened or grown Woody.

A *Terrass*, is an artificial bank or mount of Earth, commonly supported with a fronting or facing of stone, and raised like a kind of Bulwark for the ornament of a Garden.

To *thin*, is to pick off Fruit, pull up Herbs and Roots, or cut away Branches when they grow too thick, that the rest may thrive the better.

To *tick*, is to fasten Tickets or notes about Fruit-Trees containing their names and order to distinguish them.

To *till*, is to dig, delve, plow, and otherwise dress or prepare the Ground for planting or sowing.

*Toise* or *Fathom* is a measure of six foot see *Fathom*.

A *Cubical Toise* is the 216 foot every way of any thing measur'd by the *Toise* or *Fathom*.

*Ton* is a sort of Worm or Maggot that gnaws *Straw-berry* Roots.

A *Trail* is a Trellis, or Lattice frame made for the support of Wall and palisaded Trees.

To *Transplant*, is to take up any thing out of the Bed or place where it was sown, when it is grown to a fit bigness, and to plant or set in another place where 'tis to remain, or to be improved to a greater perfection.

To *Tread*, is used in more fences than one, as to tread down Earth about Trees, &c. To make it settle firmly, &c. or to tread, as the tops of *Carrots*, *Pariships*, &c. are trodden down to keep the sap from mounting, that it may nourish the Roots the better, &c.

To *Trench*, is to dig the Ground up, and to

to make *Trenches*, furrows and holes to plant *Trees*, *Artichokes*, &c. in.

*Trenches*, are Furrows with Holes fitted for *Trees*, &c.

To *Trellis*, is to palliade, nail up and fasten *Trees* upon Walls, or Pole-Hedges, and on wooden Trails or Trelisses.

A *Tuſs* of Hay, is a Term well known To *Tuſs* up, is to raise up a Branch of a *Wall-Tree* that hangs down, and tack it up fast, that the Fruit may not break it, or disfigure the Tree by Swagging it down with its weight.

To *Turn* up or loosen the Earth: See *ſtir*, and *Till*.

A *Turf*, is either a Turf of Graſs with its Earth, or ſo much Earth that hangs firm about the Root of a Tree, or Plant or Tuft of any Plant that grows in Tufts, when they are pulled up.

*Tuſs*, is a knot of Roots or Boughs, as 'twere united together in one round Body or Cluster; ſo we ſay, a Tufted or Buſhy Tree, a Tuft of *Strawberries*, &c.

*Tyger-Babbs*, are a ſort of peſtilent infects, infecting *Wall-Pears*, and *Pear-Trees*.

V.

**V***ein*, as a Vein of Earth is ſaid Comparatively of ſome parts of a Garden that produce better or worſe than other parts of it, whence we ſay, here is a good, and there is a Bad Vein of Earth.

*Vegetables*, are all ſorts of living Plants, *Trees*, or Herbs that grow.

*Vegetation*, is the ſpringing or growing of any Plants.

*Verdures*, is a Term denoting all Plants whoſe green Leaves chiefly are in uſe.

*Vermine* are all miſchievous Creatures that hurt plants.

Vigorous.

To *Vindemiate*, is to gather Grapes and make them into Wine.

*Vine-yard*, is a piece of Tilled Ground planted with Vines, in order to make Wine.

*Vine Dreflers*, are thoſe Huſbandmen that order and drels the Vines.

*Vines of Melons*, are their main running Branches, ſo called, becauſe they run along like Vine Branches.

*Vinous*, is ſaid of a Winy taſt and ſmell or Flavour in Fruit.

To *Unbind*, is to take off the Bands of a Graſſ, when it is well fixed: See *Releaſe*.

To *Uncask*, is to take any Plant out of its Caſe.

*Under Paſture*, is Mold taken from under the Tuſ of choice paſture Ground, to improve the Soil of Gardens with.

*Unhealthy*, is ſaid of *Melons* or *Cucumbers*, when they are troubled with a kind of Whitenefs that decays them.

To *Unpot*, is to take Plants out of Pots.

W.

**W***Ads of Straw*. See *Wrap* and *Straw*. *Walks*. See *Allies*.

*Carpet Walks*. See *Carpet*.

*Wall-Trees*, are *Trees* nailed, couched, and ſpread or diſplayed in a Decent and profitable Form againſt Walls.

*Waſps*, are known infects: See *Cucurbits*.

*Water Conſes*, are drains to carry off Water. See *Drains* *Dykes*, *Gutters*.

To *Wean* or *Sever*: See *Sever*.

*Weeds*, are all noiſom Herbs that annoy the uſeful Plants in a Garden.

To *Weep* or *Bleed* ſaid of Vines. See *Bleed*.

*Windfalls*, are Fruit which the Wind blows from the Trees.

*Red Winds*. See *Red*.

*Winter-greens* are ſuch Plants as are green all *Winter*. See *Ever-greens*.

*Wicks*. See *Wrap*.

*Wood*, is the ſubſtantial part of a Tree, that is ſolid and not tender.

*Wood Branches*. See *Branches*.

To *Whiten*, is to uſe art by Duncing, Earthing, tying up, &c. to whiten Plants, and ſweeten them to the taſt.

To *Wound*, is ſo to cut *Trees* in Pruning or otherwiſe as to hurt them, and ſuch hurts are called Wounds.

To *Wrap*, as to wrap up Plants, or tender *Trees* with *Wads* or *Wips* of Straw, to keep them from the Froſt.

Y.

**Y***ellow Peaches* are call'd *Roffanes*.

ADVERTISEMENT.

**T**He beſt Pruning-knives, and other Inſtruments for Gard'ning, made according to the Directions of *Mouſſi. de la Quintinye* when laſt in London, are Sold at Mrs. *Gillyflowers* a Toy-Shop, next to the *Kings-Bench* in *Weſtminſter-Hall* the Corner-Shop.

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*Vine Dressers*, are those Husbandmen that order and dress the Vines.

*Vines of Melons*, are their main running Branches, so called, because they run along like Vine Branches.

*Vinous*, is said of a Winy taste and smell or flavour in Fruit.

To *Unbind*, is to take off the Bands of a Grass, when it is well fixed: See *Release*.

To *Uncase*, is to take any Plant out of its Case.

*Under Pasture*, is Mold taken from under the Turf of choice pasture Ground, to improve the Soil of Gardens with.

*Unhealthy*, is said of *Melons* or *Cucumbers*, when they are troubled with a kind of Whiteness that decays them.

To *Unpot*, is to take Plants out of Pots.

## W.

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*Walks*. See *Allies*.

*Carpet Walks*. See *Carpet*.

*Wall-Trees*, are Trees nailed, couched, and spread or displayed in a Decent and profitable Form against Walls.

*Wasps*, are known insects: See *Cucumbers*.

*Water Courses*, are drains to carry off Water. See *Drains*, *Dykes*, *Gutters*.

To *Wean* or *Sever*: See *Sever*.

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*Red Winds*. See *Red*.

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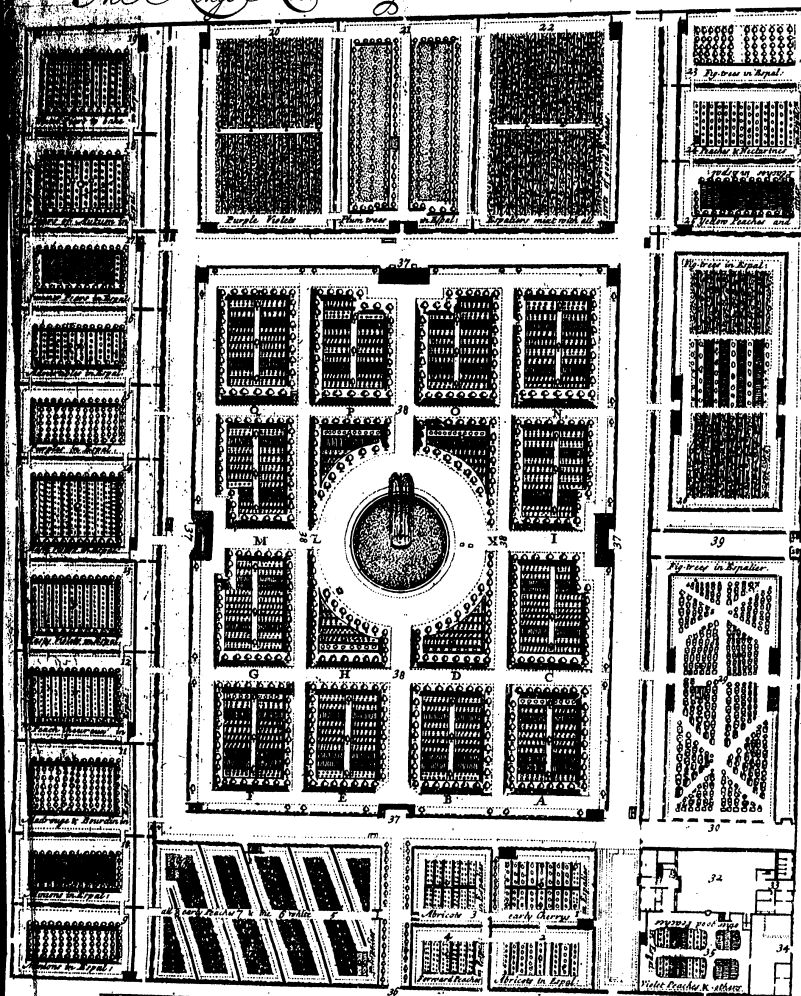
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## Y.

**Y***ellow Peaches* are call'd *Rossamer*.

## ADVERTISEMENT.

**T**He best Pruning-knives, and other Instruments for Gard'ning, made according to the Directions of Mounsr. de la Quintinye when last in London, are Sold at Mrs. Gillyflowers a Toy-Shop, next to the Kings-Bench in Westminster-Hall the Corner-Shop.



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Part I.



OF  
FRUIT-GARDENS  
AND  
Kitchen-Gardens.

VOL. I. PART I.

CHAP. I.

*How Necessary it is for a Gentleman, who designs to have Fruit and Kitchen-Gardens, to be at least reasonably Instructed in what relates to those Kind of Gardens.*

**T**HAT Part of Gard'ning, I begin to treat of here, certainly affords a Gentleman who understands and applies himself to it, a great deal of Pleasure; but that very Gard'ning being manag'd by an unskilful lazy Gard'ner, is liable to many Inconveniences, and Vexations. These are Two Noted and undeniable Truths, since nothing in the World requires more Forefight and Activity than those kind of Fruit and Kitchen-Gardens. They are, as it were, in a perpetual Motion, which inclines them always to Act either for Good or Ill, according to the good or ill Conduct of their Master; and so largely recompence the Ingenious, as they severely punish the Unskilful.

The Proof of my first Proposition consists in that certainly nothing affords more Delight, first, than to have a Garden well feared, of a reasonable largeness, and fine Figure, and that perhaps of our own Contriving or Modelling.

In the second Place, to have that Garden at all times not only Neat, for Walking, and to divert the Sight, but likewise abounding in good Things to please the Pallate, as well as for the preservation of Health.

B

Thirdly,

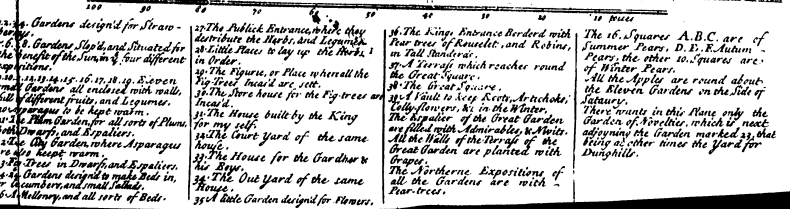


VOL. I. PART I.

*How Necessary it is for a Gentleman, who designs to have Fruit and Kitchen-Gardens, to be at least reasonably Instructed in what relates to those Kind of Gardens.*

In the second Place, to have that *Garden* at all times not only Neat, for Walking, and to divert the Sight, but likewise abounding in good Things to please the *Pallate*, as well as for the preservation of Health.

Thirdly,



Thirdly, daily to meet with some new Thing or other to do in it, as to *Sow*, to *Plant* to *Prune*, to *Pallade*, to see *Plants* grow, *Legumes* thrive, *Trees* *Blossom*, *Fruit* *Knitting*, then *Thickning*, *Colouring*, *Ripening*, at last come to *Gather* them, *Taste* them, *Treat* ones *Friends* with them, hear their *Beauty*, *Goodness* and *Abundance* commended; all which *Things* together certainly form a very agreeable *Idea*, which affords a *World* of *Variety*.

To prove my second Proposition, I should only need in few Words to Enumerate all the Disorders, wherewith our *Gard'ning* is Threaten'd, or rather Dishonour'd when it wants *Culture*; but they are too well known, nothing being so common as to hear Complaints of that Kind.

It follows from thence, that there are both Pleasures and Vexations in *Gard'ning*; and it is as certain, that the Pleasures are reserved for Skilful, Active Gard'ners, and the Vexations infallibly for those that are either Lazy or Unskilful.

This being granted, it must likewise be allowed, that those are neither to be excus'd or pitied, who instead of improving the Advantages they expected from their *Gardens*, are reduced to the Misery of laying out a great deal of Money, with Loss, Disgust and cause of Anger, &c. While others with a little Skill have avoided all those Disorders, and enjoy all the Delights; from whence it follows, that if an Ingenious Man designs to have a *Garden*, which is a thing so suitable to that Qualification, he must absolutely think of attaining some Skill in *Gard'ning*, or else not meddle with it at all.

The grand Question is to know, whether that Skill, which I think so necessary, may be acquir'd with ease or difficulty, now to take a just Medium in this Case.

As to the first, which is to know whether it be easie to acquire that Skill, I am persuaded that many Gentlemen would be desirous to attain it; for naturally every Body desires it. I am likewise persuaded, that the number of such would have been considerable already, had there been sufficient Instructions for it.

As to the second Case, whether it be difficult to attain a sufficient Skill, it is to be fear'd, that few of the Curious will be willing to undertake it; being disgusted by the Uncertainty of succeeding in it, after having Employ'd a great deal of Time and Labour about it.

The Honour of having had for so many Years the Direction of the *Fruit* and *Kitchen Gardens* of the Royal-Family, seems to give me some Authority to answer that grand Question: So that, without designing to deceive any Body, and having a great desire to contribute to the Satisfaction of the Ingenious, I affirm that it is very easie to attain as much Knowledge as is reasonably necessary for the Curious, in order to avoid what might vex them, and to put them at the same time in a Condition to enjoy their Wishes.

It will be easie for me to prove this Assertion, after having Explain'd my self more particularly upon what I think of all the Pleasures that are inseparable Companions of that part of *Gard'ning*, now in debate.

The most Considerable of those Pleasures, is not only to be able to obtain what may be produced by *Earth*, that shall have been well ordered, and a Ground well improv'd with *Trees* that perhaps shall have been *Grafted*, *Planted*, *Prun'd*, *Cultivated*, &c. by out selves, though really the Ideas of such Enjoyments are powerful Charms to Engage us to the Study of them; It consists in a great many other Things, as well for those that will act themselves, as for those that will only act by their Advice and Orders.

In the first Place, to know with certainty what is most proper to be done, in order to make each Part of the *Garden* produce happily and in abundance, what is desired for every Month in the Year. The Judicious *Gard'ner*, as I have already observ'd, never fails in this, of being recompens'd of his Labour, Cares and Skill. The Ground he Cultivates himself, without doubt affords him more Profusion, being in reality better Cultivated, as if it dreaded, as I may say, the Misfortune of belonging to a Master, who only knows by his *Gard'ner* how it must be used. It seems, that to Engage that skilful Master it belongs to, to continue the Cultivating of it himself, it endeavours to produce more than it used to do.

This Pleasure of *Gard'ning* in the second Place consists in knowing how to avoid many great useless Expences, to which we are often engaged by ill Councils. Is it not usual in most Places to see People continually Employ'd in doing, undoing, and doing again? And moreover is it not common to see a great deal of Time, and many Workmen Employ'd about a thing that might have been done quicker, and by less Hands? So that a great deal of Money is laid out, which often creates great Vexations, and sometimes great Inconveniencies.

It

*Ista ratio ardu-  
de spe magis &  
juranditate,  
quam fructu, ut-  
que emolumento  
tenetur, &c.  
Cicero.*

*Honestis mani-  
bus omnia me-  
lus proveniunt,  
quam ann & cu-  
riolus fuit.  
Plinius.*

*In felix ager,  
cujus Dominus  
Villam audit,  
non docet.  
Columella.*

It consists in the Third Place, in knowing the Inconveniencies, that I shall explain in due place, of which some are Invincible, and others not: This knowledge serves to prepare us betimes to receive the first patiently when they happen, and securely to avoid the second, without entering into a thousand impertinent reasons of an unskilful, careless *Gard'ner*, who endeavours to conceal his negligence, or incapacity, by imputing all the Disorders, and Barrenness of his *Garden* to a wrong cause.

This Pleasure consists in the Fourth Place in being able to condemn justly on the one side what is amiss or ill done in a *Garden*, and on the other to commend what is well, and according to Rules. There is hardly any thing more natural in all Masters who speak of their *Gardens*, than to blame or commend something in them, as if they really intended thereby to discover what they are; and yet nothing is more dangerous for the service of a *Garden*, nor more disagreeable for such a Master than to expose himself to be laugh'd at, or corrected by his *Gard'ner*, which certainly happens when the Master is not capacitated to speak like an Artift upon that Subject.

It consists in the Fifth Place in being reputed capable of giving good advice, and willingly to those who stand in need of it: What greater satisfaction can a man receive, than to assist or undeceive a friend who was in an error, or at a loss, and ready to give over his undertaking, putting him afterwards in a way of daily commending the good Fortune his Friend has procur'd him in his Work?

Lastly, this Pleasure chiefly consists in being capable of judging by our selves, and for our selves, of the capacity of a *Gard'ner*, either to avoid the Inconveniency of sometimes discharging a good one upon very trivial pitiful reasons, and then taking an ill one in his room, or to resolve wisely to discard him who has not done his duty, and be able to chuse another better qualify'd.

Now if it be true, that there is so much facility in attaining so many real Pleasures, which I am going to demonstrate visibly; am I not in the right to conclude that when any body undertakes a *Garden*, without endeavouring to get at least a sufficient insight in *Gard'ning*, he deserves all the disgusts, which are numerous, instead of deferring all the delights, it may produce, the number of which is infinite, and that consequently it is necessary to study the attaining of such a degree of knowledge, as is absolutely requisite in those Affairs?

It may perhaps be objected at first, that hereby I propose an Infallible expedient to introduce the most pernicious thing in nature in all manner of affairs, that is, to introduce Scoliasts, or Smatterers: The Objections seems pretty strong, but the two Answers I am going to make to it, in my opinion, are yet of much more force.

The first is, that when a Gentleman shall once have attain'd a certain knowledge of some Principles capable of affording him a good Tincture of *Gard'ning*, it is most certain, that he will not rest with that bare knowledge of the first Elements, but will infallibly have a passionate desire of knowing something more of an Art, that he is so much delighted with. He will soon improve the knowledge he shall have acquir'd, and consequently will not remain long in that dangerous and so much fear'd station, which is call'd Smattering.

The Second Answer, which is no less material, is, that without doubt, that Smattering of an Ingenious Person, if we may call it so, is much better, being grounded upon good Principles, than the false Notion of knowledge of common *Gard'ners*; it being most certain that you seldom find any thing among such beyond a presumptuous Prating Ignorance, upheld by some wretched Rote. Is it not a great happiness to be able to attain a sufficient insight into those matters, and to put our selves above so many false reasonings, we should otherwise be lyable to, and so avoid a great deal of vexation, to purchase abundance of Pleasure?

## CHAP. II.

*How easie it is for a Gentleman to acquire at least a sufficient Knowledge in Point of Gard'ning.*

NEXT to that first Foundation, which establishes, that a Judicious Man must apply himself to the attaining a sufficient skill into *Gard'ning*.

I propose this, That if he cannot afford so much time as to arrive to a full Perfection (which is not absolutely necessary) he may rest assur'd that he may learn enough for his purpose;

purpose, that is, to be capable of ordering the most material Things that are to be done in his *Garden*, and to hinder the *Gard'ner* from Imposing daily upon him, provided he be in some measure instructed in the Five or Six following Articles.

The First relates to the Quality of the *Ground*, its necessary Depth, to the *Tillage*, *Amendments* and ordinary modelling of useful *Gardens*.

The Second relates to the *Trees*, to chuse them well qualified, either when they are still in the *Nursery*, or taken from thence, to know at least the Names of the Principal Kinds of *Fruits* of every Season; to be able to distinguish them, and what number of each the Compass of his *Garden* may require; to understand how to prepare *Trees* both as to the *Head* and *Roots*, before they are put into the *Ground* again; and afterwards to place them at a convenient distance, and expose them well; to know, if not all, the Rules of *Pruning*, yet at least all the Principal ones, either as to *Dwarfs* or *Wall-Trees*; how to *Pinch* off some *Branches*, being over Vigorous; to *Pallisade* such as require it, as also the *Trimming* of such useless *Buds* and *Sprigs* as cause a Confusion; and lastly to give every one of them the Beauty which they are capable of.

The Third Article relates to *Fruit*, to make it grow fine, gather it prudently, and eat it seasonably.

The Fourth relates to *Grafts* on all kind of *Fruit-Trees*, whether placed in *Gardens*, or still in the *Nursery*, both as to the Time, and Manner of applying them.

In fine, the Fifth Article relates to the general Conduct of all *Kitchen-Gardens*, and especially to understand the Pleasure and Profit they may yield in every Month of the Year.

In my Opinion, the Number of these Articles is not Considerable; and, I assure the Curious, that they may be fully Instructed therein, and in a little Time, by the short Abridgment that follows.

### CHAP. III.

#### An Abridgment of the Maxims of Gard'ning.

##### First ARTICLE.

###### Of the Qualifications of the Earth or Soil.

THE *Earth* of a *Garden* is known to be good, particularly for *Fruit-Trees*.

First, when all that the *Ground* produces of it self, or by *Culture*, is Beautiful, Vigorous, Abundant and consequently nothing Poor; or small, when it should be strong; or yellow, when it should be green.

Secondly, when in smelling to a handful of that *Earth* it casts no ill Smell.

Thirdly, when it is easie to Till, and is not over strong.

Fourthly, When in the handling of it, it is mellow, without being too dry and light, like *Turf-Earth*, or like *Grounds* that are altogether sandy.

Fifthly, When it is not over-moist, like *Marshy Ground*, or too hard like *Loomy Ground*, at the bottom of good *Meadows*, approaching near the Nature of stiff Clay.

Lastly, in Relation to the Colour, it must chiefly be of a Blackish Grey, and yet there are some that are Reddish which do very well; I never saw any both very White and Good.

##### Second ARTICLE.

###### Of the Depth of the Ground.

Beneath the Surface, that appears good, you must have Three Foot of *Earth* like unto that which is above, which is a very material Maxim, of which you must be reasonably well assur'd, by founding the *Ground* at least in five or six different Places.

It is a great Error, to be satisfied with less Depth, especially for *Trees* and long *Rooted-Plants*, viz. *Artichokes*, *Beet Roots*, *Scorfonners*, *Parsnips*, &c.

Third

##### Third ARTICLE.

###### Of Tillages.

The most frequent are commonly the best, at least in relation to *Trees*, there must be Four Yearly; viz. at the Spring, and Midsummer, at the end of *August*, and immediately before Winter; and generally speaking the *Ground*, must never be left unmanur'd and full of Weeds, nor trampled or beaten by great Showers of Rain: It is very pleasing to the Eye when newly Till'd.

Your small Plants, as *Strawberries*, *Lettice*, *Succory*, &c. require to be often Weeded, the better to perform their Duty.

##### Fourth ARTICLE.

###### Directions for Amendments.

All sorts of Rotten Dung of what Animals soever, Horses, Mules, Oxen, Cows, &c. are excellent to amend the *Grounds* that are used for *Kitchen Garden Plants*: Sheep's Dung has more Salt than all the others, so that a smaller quantity of it must be used; It is partly like that of Hens and Pigeons, but I would not advise any one to make use of it, by reason of a little sort of Fleas they abound with, which generally spoil the *Plants*.

The Dung of Leaves thoroughly rotten, is hardly fit for any thing, but to be thrown over new sown Beds, to hinder the Rains or Waterings from beating too much upon the Surface, and so hinder the Seeds from rising.

All the *Legumes* of the *Kitchen-Garden* require a great deal of Dung; the *Plants* or *Layers* of *Trees* require none.

The only good place to put the Amendments in, is towards the Surface.

The worst place for Dung in Trenches (or places that are Dug in order to plant *Trees*) is in the Bottom.

As to those Trenches, it cannot be said they are good and well made, unless they be near six Foot wide, and three in depth.

##### Fifth ARTICLE.

As for the common Disposition of *Fruit* and *Kitchen-Gardens*, in my Opinion the best, and most convenient for a *Gard'ner*, is that which is made, as much as can be, in well regulated Squares; so that if it be possible the Length may somewhat exceed the Breadth; the Breadth of the Walks must likewise be proportion'd, both to their Length and the whole Extent of the *Garden*.

The narrowest must not be less than six or seven Foot to Walk in, and the broadest, though never so long, must not exceed three or four Fathom at most; and as for the largeness of the Squares, in my Opinion, it is a Fault to make any above Fifteen or Twenty Fathom on one side, to a little more or little less on the other; they will be pretty well of Ten or Twelve on one side, to Fourteen or Fifteen on the other, all which is to be regulated proportionably to the largeness of the *Kitchen-Garden*.

The common Paths for the Convenience of Service, are commonly of a Foot.

No *Kitchen Garden*, though never so agreeable in the Disposition of it, can ever succeed well, without a Convenience for Waterings.

##### Sixth ARTICLE.

As to this Article, which relates to the Knowledge of *Fruit Trees* that are to be planted, it suffices, and is material to know.

That a *Tree* to be worth the Chusing, whilst yet in the *Nursery*, must have a clean and shining Bark, and the *Shoots* of the Year, Long and Vigorous.

And if it be already out of the *Ground*, it must, besides these Conditions, have fine, sound *Roots*, and passably thick in proportion to the *Stem*; I seldom take any of those *Trees* that have nothing besides certain hairy or Capillar *Roots*.

The straightest *Trees*, having but one *Stem*, in my Opinion, are the fittest to be chosen in order to Planting.

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As to *Peach* and *Apricock Trees*, those that have not been *Grafted* above a Year, provided the *Shoots* be fair, are better than those that have been *Grafted* Two or more; and yet the *Peach Trees* require more exactness in this than the *Apricock*; and you must never take a *Peach Tree*, unless it has fine, found and whole *Eyes* or *Buds* at the lower part of the *Stem*. The thickness of an Inch, or somewhat more in such *Stems*, is what is particularly to be esteem'd in *Peach Trees*.

*Peaches Grafted* upon *Almond Trees* thrive better in a dry light Ground, than in that which is Loamy and Moist.

But the clean contrary is to be observ'd for those that are *Grafted* upon *Plum-Trees*. In all other Dwarf *Trees*, the thickness must be between Two and Three Inches Circumference about the Lower Part.

Only excepting *Apple Trees Grafted* upon *Paradise Stocks*, for which the thickness of an Inch is sufficient.

The Thickness of high *Standards* is to consist of Five or Six Inches on the Lower Part, and the height of about Six or Seven Foot.

The *Graft* of little *Trees* must be applied within two or three Fingers from the Ground. And when it closes again, it argues much Vigour in the *Foot*, as well as a great deal of Skill in the *Gard'ner*, who has had the Ordering of it.

All manner of *Pears* succeed in *Dwarfs* and *Wall-Trees*, and upon free *Stocks*, as well as upon *Quince*; but it must be Noted, they must only be *Grafted* upon free *Stocks* in Light Grounds, as well as in those that are but of an ordinary Goodness.

Winter *Bon Chrestien Pears* can hardly attain that Yellow, and *Carnation Colour*, which is to be desired in them, either upon *Dwarfs* or *Wall Trees* being *Grafted* upon free *Stocks*, and therefore must be *Grafted* upon *Quince*.

Your *Virgouté* and *Robines* upon Free *Stocks*, are hard to bear; but yet there is a Remedy for it; they always bear much sooner upon *Quince*.

Your *Burgamots* and little *Muscot Pears*, seldom succeed upon *Dwarfs*, especially in moist Grounds.

The Principal kinds of *Fruits*, either *Pears*, *Apples*, *Peaches* or *Plums*, are sufficiently known; but whereas the making of a very well contriv'd *Plantation* is of great Consequence. Our new *Curioss* will do well to consult the *Treatise* I have written with a great deal of Exactness upon the Choice, and proportion of all sorts of good *Fruits* to be plant'd in any *Garden* whatever, either *Dwarfs*, *High Standards* or *Wall Trees*; otherwise I dare affirm, that he will be liable to commit abundance of Faults that will very much vex him. In the mean time he ought to know that as to *Pears*, the best for the Summer are the *Little Muscats*, the *Cuisse Madam* (or *Lady-Thigh*) the *Skinless Pear*, the *Blanquettes* or *White Pears*: viz. the large, the small and the long *Stalk'd* one; the *Robine*, the *Casselette*, the *Musk Bon Chrestien*, the *Reussiclette*, and the *Salviasi*. The Chief for Autumn are the *Beurré*, *Burgamots*, *Vertelognes*, *Crasana*, *Blossom'd Muscat*, *Lansac* and *Loisifs Bonne*. For the Winter, the *Virgoute*, *Leschasseris*, *Elpine* or *Thorn Pear*, *Ambrette*, *St. Germain*, *Winter Bon Chrestien*, *Colmar*, *Bugy*, *St. Austin*, and some *Dry Martins*.

As to *Apples*, the Chief are the *Calvilles* both Red and White; *Reinettes*, both Grey and White; all the *Courpendus* or short stalk'd Apples, and the *Fenellets*.

As to *Plums*, the principal are the *Yellow Haffy*, the White and Purple *Perdrigon*, the *Mirabelles*, the several sorts of *Damask*, the *Rebecourbon*, the *Emperasses*, the *Apricock Plums*, the *St. Catherine*, the *Imperial*, the *Royal*, &c.

As to *Peaches*, the most considerable are, the *Early Peach*, the *Troy Peach*, the *Maudslins* White and Red, the *Rossame*, the *Minion*, the *Chevreuse*, the *Bourdin*, the *Violets* both Early and Late, the *Perfiques*, the *Admirable*, the *Purple Peach*, the *Nives*, the *Smooth Yellow Peaches*, and the latter *Yellow Peaches*.

And as for the *Pavies* or *Bastard Peach*, the *Purple Nellarin*, the *White Pavie*, the *Cadillac*, and the *Rambouillet*.

As to *Figs*, those that are White, both Inside and Outside; viz. the Long and Round are best for this Country.

As to *Grapes*, the *Muscats* is chiefly to be esteem'd, whether White, Red or Black; Long *Muscats*, being well plac'd, and in a good Ground, is admirable; but the *Chasselas* succeeds more constantly than any.

As for *Cherries*, every Body knows that the Latest, and the *Griote*, and even *Bigarras*, are very good *Fruits* upon *Standards*; *Early Cherries* are of no Value unless upon *Wall Trees*.

## Seventh ARTICLE.

To prepare a *Tree*, both as to the *Head* and *Roots*, before the planting of it, I am of Opinion, that all the *Capillar Roots* must be taken away.

Only preserve a few thick *Roots*, especially the Youngest, that is the Newest.

These are Commonly Reddish, and have a more lively Complexion than the old Ones: they must be kept short in proportion to their Thickness.

The Longest in *Dwarfs* must not exceed Eight or Nine Inches, and in high *Standards* about a Foot; you may allow them more Extent, in *Mulberries* and *Cherry-Trees*.

The weakest *Roots*, must be satisfied with one, two, three or four Inches at most, according as they are more or less thick.

One Rank of *Roots* is sufficient, when placed as they should be; that is, when there are Four or Five *Roots* round about the *Foot*, especially when they are partly like so many Lines drawn from a Centre to the Circumference; and even Two or Three being good, are better than Twenty mean ones; I have often planted *Trees*, with one single *Root*, which indeed was extraordinary good, and they succeeded well; you may easily see what I mean by a Rank of *Roots* in the *Treatise* of *Plantations*, where I have caused Plates to be Engraven to that End.

## Eighth ARTICLE.

In order to Plant well, you must chuse dry Weather, to the End that the *Earth* being very dry, it may easily cling about the *Roots*, and leave no vacuity; and particular Care must be taken lest it grow to the Consistence of Morter, which afterwards coming to harden, might hinder the Production, and the Shooting of the New *Roots*.

The best Season for Planting is from the beginning of *November* until the End of *March*; yet in dry Grounds it is very material to Plant at the very beginning of *November*, but in moist *Soils* it is better to stay till the beginning of *March*.

The Disposition of *Roots* requires, that the Extremity of the Lowest should not be above a full Foot deep into the Ground, and the nearest to the Surface, must be covered with Eight or Nine Inches depth of *Mould*. In a dry *Soil* it will not be improper to make a little But or Hillock over those *Roots*, to hinder the Sun from spoiling of them, and when the *Tree* has taken *Root* into the Ground, it must be Level'd again.

After having Prun'd the *Roots* of a *Tree*, you must cut the *Stem* of the Length it is to remain, before you Plant it, and never stay to cut it till after 'tis Planted.

In *Dwarfs*, I regulate that height to be about Five or Six Inches in a dry *Soil*, and about Eight or Nine when Moist.

And in high *Standards* the proper height is between Six and Seven Foot in all manner of *Soils*.

In Planting, care must be taken to turn the best *Roots* on that side which has most *Earth*, and that none, as much as is possible, may incline straight downwards, but rather look towards the Horizon.

Those who after planting, shake or trample on little *Trees*, do them a great deal of Injury; whereas on the contrary, it is absolutely necessary to trample and raise the Ground about the great ones, to secure them against the Impetuosity of the Winds.

The Head or Top of *Espaliers* or *Wall Trees* must lean towards the Wall, yet so, that the Extremity of the Head must be at Three or Four Inches distance from it, and the Wound must not appear.

The distance between them is to be regulated according to the Goodness of the *Earth*, and particularly according to the height of the Wall; they must be nearer to one another against high Walls, and at more distance against low ones.

In this particular Case of the common distance of *Wall Trees*, it is to be regulated from Five or Six Foot, to Ten, Eleven or Twelve. The Walls being Twelve Foot high or more, you must always let one *Tree* shoot up to garnish the Top, between two that shall garnish the Bottom; in which case the *Trees* must be plant'd within Five or Six Foot of one another: But against Walls that are not above Six or Seven Foot high, the distance must be about Nine Foot.

The distance of *Dwarfs* must be from between Eight and Nine Foot to Twelve, or even a little more, being *Plum-Trees*, or *Kernel-Fruit* upon Free *Stocks*.

In high *Standards* from Four Fathom to Seven or Eight, for great *Plantations*.

In good *Soils* the *Trees* must be at a greater distance than in bad ones, because there their Heads or Tops spread more.

This is contrary to the Opinion of Theophrastus, who says, *Stilbum est amittere radices, quas habemus, ut acquiramus novas*. Contra Xenoph.

When Trenches are newly made, the *Earth* will sink at least Three or Four large Inches. This is a very necessary Observation, to make in order to the keeping the *Earth* about them, higher than the Neighbouring Surface, and to avoid falling into the Inconvenience of having *Trees* sink too deep into the Ground.

For the Success of *Kernel Fruit*, it matters but little whether the *Graft* be above or under Ground.

But as for *Stone Fruits*, it is better not to be in the least cover'd with *Earth*. Yet for the Beauty of both, it is to be wish'd that it may appear; but the main point is to have the *Roots* well plac'd, so that neither the great Heat, nor great Cold, nor the Iron of the *Spade* may prejudice them.

As for the Understanding of the *Expositions*, that are most proper for the different kinds, is an account which will be best learned in a Treatise written on purpose upon that Subject: Yet generally speaking I may say, that the best of all in our Climates is the *South*, and the Worst is the *North*; the *East* is almost as good as the *South*, especially in hot Soils; and lastly the Exposition of the *West* is not amiss for *Peaches*, *Plums*, *Pears*, &c. but is stark nought for *Muscats*, *Chasselas*, and all manner of large *Grapes*.

### Ninth ARTICLE.

To have a reasonable Insight into the *Pruning* of *Trees* it is necessary at least to know the Time and Cause, and especially, if possible, the Manner.

As to the Time, it is always good to *Prune* from the Beginning of the Fall until the New Leaves grow again, and no *Tree* must be *Prun'd* above once a Year.

Keeping within these Bounds, it will not be improper to *Prune* Weak *Trees* sooner, and those that are Vigorous later.

As for the Cause, there are two Reasons for *Pruning*; the first to dispose *Trees* to bear finer *Fruit*; and the second to render them at all Times more pleasing to fight than they should be, if they were not *Prun'd*.

To attain the Effect of this second Condition, must be by the means of the Figure, that is given to every *Tree*.

That Figure must differ according to the difference of the Ground *Platz*, and does not Extend beyond *Dwarf* and *Wall Trees*; for as for the generality high Standards are not *Prun'd* often.

The thick *Branches* only are capable of affording that Figure, which is absolutely necessary to be well understood, and must be had constantly in the Mind.

A *Dwarf*, in order to be of a beautiful Figure, must have a low *Stem*, be open in the middle, and of a round Circumference, equally garnish'd on the Sides: Of these four Conditions the most material is that which prescribes the opening of the middle, the greatest Defect consisting in a Confusion of too much Wood in that very middle, which of all things must be avoided.

The Perfection of a *Wall Tree* consists in having its strength and *Branches* equally divided on the two Opposite Sides, in order to be equally furnish'd throughout the whole Extent of it, whatever part the Head begins at, whether it has a low *Stem*, in which case it must begin within half a Foot from the Ground, or high, and then it begins from the Extremity of the *Stem*, which is commonly about Six or Seven Foot.

The main thing in this depends on the Distinction which is to be made among the *Branches*, and the good use that is to be made of them; the *Branches* are either thick and strong, or slender and weak; every one of them furnishing us with a Reason to take it away or preserve it, to leave it long, or to *prune* it short.

Among both, some are good, and others ill, whether Thick or Slender.

The good are those that grow according to the Order of Nature, and those have thick or large *Eyes*, pretty close to one another.

The ill ones on the contrary, are such as grow against the Order of Nature, have flat *Eyes*, and at a great distance, for which Reason they are call'd *Branches of False Wood*.

To understand that Order of Nature, you must know in the first Place, that the *Branches* should only shoot from those that were cut shorter at the last *Pruning*, and that all such as shoot from other Parts are *Branches of False Wood*.

Secondly, that according to the Order of New *Branches*, if there be more than one, that which shoots from the Extremity must be thicker and longer than that which grows immediately beneath it; and this thicker and longer than the third, and so of all the rest; and consequently when any of them prove thick where they should be slender, it is a *Branch of False Wood*. There are some few Exceptions set down in the Treatise of *Pruning*.

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The good small *Branches*, both as to Stone and Kernel-Fruit, are the bearing *Branches*; and the good Thick ones are for *Wood*; but quite contrary as to *Fig-Trees* and *Vines*.

As for the manner of *Pruning* it is generally look'd upon as much more difficult than really it is; the Principles, which are pretty easie, being once understood, there is no difficulty in the Operation, and yet it is the Master-Piece of Gard'ning.

The Chief Maxims are, First, That Young *Trees* are much more easie to *Prune* than old Ones, especially those having been often ill *Prun'd*, and not having the Figure they should have: The best Gard'ners are very much put to it, to correct those old Defects. I have given particular Rules for such Inconveniencies.

Secondly, That the strong *Branches* must be cut short, and commonly reduc'd to the length of Five, Six or Seven Inches; yet there are certain Cases in which they must be kept longer; but those are not common: I specify them in my great Treatise.

Thirdly, That among the others, there are some that may be kept shorter, and others longer; that is, even to Eight, Nine and Ten Inches; nay, and to a Foot, a Foot and a half, and perhaps more, especially in *Peach*, *Plum*, and *Cherry Wall Trees*, which must be regulated according to their Strength and Thickness, to be capable of Nourishing and Bearing, without breaking such *Fruits* as they shall be Burthen'd with.

Upon Vigorous well Proportion'd *Trees*, there can hardly be too many of those we call *Branches for Fruit*, provided they cause no Confusion: But as for the Thick ones, which we call *Branches for Wood*, for the Generality in all sorts of *Trees* only one must be preserv'd, of all those that have been produc'd by every *Branch*, having been *Prun'd* the preceding Year.

Unless the *Trees*, being very Vigorous, the Extremities of the new *Branches* chance to be very distant the one from the other, and looking towards different opposite Parts, being bare on the sides; which of necessity will require, being fill'd up for the perfecting of the Figure; in which Case we may leave Two, nay Three, provided they be all of different Lengths, and never form a forked Figure.

The *Fruit* bearing *Branches*, perish after having perform'd their Duty with this Distinction, that in *Stone-Fruit* they die at the End of one Year, or Two, or Three at most.

And in *Kernel-Fruit*, not till after having served Four or Five Years.

Therefore foresight is of great Use, to think sometimes of providing new *Branches* to fill up the Room of such as we know are to die, in order to avoid growing too bare and barren.

Those kind of *Fruit Branches* are good, whatever part of the *Tree* they shoot from, either Inwards or Outwards.

But a Thick one is always ill, when it shoots Inwards in a *Dwarf*, unless it be to close such as open too much, as it commonly happens in *Butter Pear Trees*.

So that the Beauty of the *Trees*, and the Beauty and Abundance of the *Fruit*, depend chiefly upon good *Pruning*, the good Management of certain *Branches* that are at once Thick and Good, and the taking quite away of such as are both Thick and Bad.

And whereas it happens sometimes, that a *Branch* having been left long the foregoing Year in order to bear *Fruit*, receiving more Nourishment than naturally it ought to have, grows thick, and shoots other thick ones. One of the material Points of *Pruning* consists not only in using this *Branch* like other *Branches for Wood*, but especially in not leaving upon it any thick one grown on the Extremity of it, unless it be with a design to let the *Tree* shoot upwards, in order to make it a *Standard*.

This good Conduct teaches for the Generality to lower *Trees*, I mean, that it is better in *Pruning*, wholly to take away the highest *Branches* that are thick, preserving only the lowest, than to do the contrary. Provided always, that the highest prove not better plac'd than the lower, to contribute towards the Beauty of the *Tree*, which is not usual; for in such a Case, the lowest must be taken away, and the highest preserv'd: The first design in this is, to have fine *Trees*, it being most certain that the Abundance of fine *Fruit* never fails attending such a Disposition of a fine Figure, since none of the small *Branches for Fruit*, are removed, but on the contrary are thereby multiplied, and afterwards freed from whatever might obstruct them.

The lowering of them, contracts into the *Branch* seated on the Extremity of that which has been cut down, all the Sap that would have gone into the Superior, or Superior, that have been taken away; whereby the preserv'd *Branch* grows much stronger, and consequently capable of greater Production than it should have been.

And whereas sometimes, contrary to the Order of Nature, weak *Branches* shoot from the Extremity of the thick one, that had been thorow'd at the preceding *Pruning*; this Conduct teaches us to preserve those weak *Branches*, and to perform the *Pruning* upon that among the thick ones, which being underneath that, or those weak ones, appears most proper for the perfecting of the Beauty of the Figure.

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Besides the *Pruning* we have now mention'd, we sometimes perform another Operation which we call *Pinching* or *Breaking*; which is commonly of more use for *Peach Trees* than any others, unless it be upon all sorts of *Grafts* perform'd upon thick *Vigorous Trees* already placed in the *Garden*: The Effect of this *Pinching* is to hinder the *Branches* from growing too thick, and consequently useless for *Fruit*, as also from growing too long, to hinder a *Tree* from shooting upwards too soon, or from being broken by high *Winds*.

The Effect of it, is likewise to produce many *Branches* instead of one, among which some small ones will be of use for *Fruit*, and some thick ones for *Wood*: The use of it, or rather the time of using it, is about *May* and *June*, and must be perform'd by breaking with the Nail that *Branch*, which being about half a Foot, or somewhat more in length, begins to appear too thick..

In Order to *Pinch* or break to the purpose, the thick *Branch* must be reduc'd to Three or Four *Eyes* or *Buds*; and when the *Branch* so *Pinch'd* proves obtuse in shooting thick again, the same Operation of *Pinching* must be perform'd again, but a Weak *Branch* must never be *Pinch'd*.

I will neither mention here the *Pruning* of Old *Trees*, nor of *Vines*, or *Fig-Trees*, which I refer to the particular Treatise I have written upon each of them.

### Tenth ARTICLE.

'Tis commonly towards the middle of *May* that *Espaliers* or *Wall Trees* begin to require being *Pallisado'd* or Bent.

The Beauty of *Pallisading* or bending, consists in disposing with Order to the Right and Left those *Branches* that may grow on each side, to avoid Confusion, Barrenness and Crossing one another.

But whereas the Defect of Barrenness is the greatest of all, no scruple must be made of Crossing, when Barrenness cannot otherwise be avoided.

Care must be taken to *Pallisade* or tack as often as the *Branches* appear long enough to be tack'd, which otherwise would be in danger of breaking.

Above all things it is very necessary to preserve all the fine *Branches* *Peach-Trees* shoot in the Summer, unless they prove too numerous as to cause a Confusion, which happens but seldom in a well order'd *Tree*.

But however when necessity requires it, a great deal of Discretion must be used, in tearing or cutting close some of the most Unruly, to hinder those that are hid from stretching too much, and growing bad: It is likewise proper to take away the *Branches* of false *Wood*, that grow sometimes in the Front of *Pear Wall Trees*, as well as those that grow in the middle of *Dwarfs*, which we call *Trimming* of *Buds* or useless *Branches*.

### Eleventh ARTICLE.

It is likewise very material for the Master, as well as for the Gard'ner, to know how to gather all manner of *Fruits* well, of whatever Season they are; and to lay up, and order, in the Store-house, such as do not ripen upon the *Trees*, to preserve both the one and the other in their Natural Beauty, and eat them in due Season, without allowing them time to spoil.

This may have been learn'd in the particular Treatise written upon that Subject.

### As to the Twelfth ARTICLE.

Which relates to *Grafts* and Nurseries.

The most common and best Method of *Grafting*, is either cleftwise, or Scutecheonwise: The first in *February* or *March* upon *Trees* from the Thickness of an Inch Diameter to Ten and Twelve Inches Circumference, and even more: This way of *Grafting* is good for all manner of *Fruit Trees*, excepting only *Peach*, *Almond*, *Mulberry*, *Fig-Trees*, &c. upon which it seldom succeeds.

As to the *Scutecheon Graft* for Stone and Kernel-Fruit, if it be at the Time of shooting, it must be perform'd about Midsummer; if at the closure of the *Eye*, and upon *Plum*, *Pear* and *Apple-Trees*, about the middle of *August*; and upon *Peach* and *Almond Trees*, towards the middle of *September*; that is, both on the one and the other it must only be done about the Declining of the *Sep*.

Every

Every Body knows, that the manner of *Grafting Chestnut Trees* is Plute-wise and towards the End of *April* or the Beginning of *May*, when the *Bark* begins to loosen with Ease: The *Fig Trees* may be *Grafted* at the same time, and in the same manner, or else plain *Scutecheonwise*.

*Vines* are *Grafted* likewise upon old *Wood*, which must be covered with *Earth*, and in the Months of *March* or *April*.

*Pears* succeed equally well upon *Wildings* and *Quince-Stocks*.

*Peaches* upon *Plums* and *Almonds*.

*Apples* upon an *Apple Wilding* to make great *Trees*, and upon *Paradise* for *Dwarfs*.

*Plums* and *Apricocks* upon the *Suckers* or New Shoots of *Plum Trees*, of which the best are those of *St. Julien*, and black *Damask*.

They succeed sometimes upon *Almond Trees*, and sometimes also *Pears* and *Plums* are *Grafted* mutually upon each other, but commonly without success.

### There Remains the last ARTICLE.

Which relates in the first place to the Profit of Kitchen-Gardens, and in the second to the Work of every Season.

AS to the Profit it is sufficient to know, that the Kitchen-Garden must afford its owner some Thing in every Month of the Year: Inasmuch, that he may never be necessitated to send for out of his Garden, what skillful Gard'ners expose to Sale in Publick Places.

For Example, in *November*, *December*, *January*, *February*, *March* and *April*, besides what has been preserv'd in the Store-house, viz. Kernel-Fruit, Roots of all kinds, *Cardoons*, *Artichokes*, *Colliflowers*, and *Pumpions*. The Kitchen Garden must afford *Potterbs*, that is, *Sorrel*, *Beets*, *Winter Cabbage*, *Leeks*, *Chibols*, *Parshy*, *Mysorims*, *Sallads*, especially *Winter-Succory*, *Selery*, *Macedonian Parshy* or *Smallage*, with the Furnitures of *Charvel*, *Burnet*, *Allelya* or *Wood Sorrel*, *Balm*, *Tarragon*, *Passepierre*, &c.

In case there be hot Beds, during the great Colds you may expect Novelries, viz. Green *Asparagus*, *Small Lettuce*, *Charvil*, *Basil*, *Cresset*, *Hartshorn*, and even *Sorrel*, &c. at all times; to which may be added, *Raddishes* in *February* and *March*, and *Purcelain* in *April*, &c.

In *May* and *June* you may easily have abundance of *Pot-herbs*, and new *Sallads* of all Kinds, viz. *Purcelain*, *Lettuce* to bind, abundance of *Artichokes*, *Pease*, *Beans*, *Concumbers*, *Raddishes*, *Asparagus*, *Gooseberries*. *Currans* commonly begin in *June*, with *Strawberries* and *Rasberries* for the remainder of the Month, and *Mysorims* always.

In *July* and *August* an equal abundance with the preceding Months. And besides that, French *Beans*, new *Apple-Cabbage*, and especially *Melons*, *Pears*, *Plums*, *Peaches* and *Figs*.

In *September* you begin to have, besides the other, *Muscats*, *Chasselas*, and other *Grapes* of all kinds, as also second *Figs*.

In *October* the same Things, perhaps excepting the *Melons*; of which the Season generally passes when the Nights grow cool, and rainy Weather comes in: But in recompence the Autumn produces a world of good *Pears* and *Cardoons*, *Selery* and *Spinage*, &c. comes in Season.

As for the Method of making all these Things grow, together with the Works of every Month, is what a Gard'ner must of Necessity Understand and Practice; and when the Master shall be so curious as either to desire to Understand it himself, to correct the Gard'ner when he fails, or to enjoy the Pleasure of seeing the Order and Succession of the Productions. He may afford himself that divertisement, in reading the Book in which this Matter is thoroughly treated of, besides he may fully inform himself of all the Rest of Gard'ning from all the particular Treatises, that are written upon every individual Part thereof.

## C H A P. IV.

## How to make Choice of a good Gard'ner.

*Vitæ nostræ agri-  
cultura male ce-  
dit, qui rem ru-  
sticam pessima  
cuique serorum  
velut caruisci  
noxa dedimus,  
quam maxime  
noster opti-  
mus quisque op-  
tine tractavit.  
Columella.*

IT is not sufficient, as we have already said, for our *Virtuoso* to have acquired the Under-  
standing of what we have mention'd, he must moreover be Capacitated to judge by  
himself, without any other help of the Skill, or Ignorance of all sorts of Gard'ners, in order,  
if possible, never to be deceiv'd in his Choice; but yet the Truth is, that the number of  
the good Qualifications, essential to that Employment, is so considerable, that whenever I  
reflect on them all, I almost Despair of ever meeting with an Accomplish'd one.

And yet without rendering the thing almost Impossible, and without minding a scruple  
that comes into my mind, that I can say nothing here but what every Body knows as well  
as my self, I am resolv'd to treat of this Business at large, being perswaded that it is one  
of the most Essential of all those that belong to Gard'ning, and indeed the very Soul of  
Gardens; for since a perpetual Culture is the only way to render a Garden Delightful, it is  
impossible ever to expect it so, unless it be in the hands of a Skillful Laborious Gard'ner.

Therefore barely relating my Method on such Occasions, I shall only say, that to act  
Prudently in the Choice of a Gard'ner, it is fit to mind first the exterior Part of his Person,  
and secondly, the good interior Qualifications that are absolutely requir'd in him.

By the first, I mean his Age, Health, Shape and Motion; and by the second, Pro-  
bity in his Manners, Honesty in his common Dealings, and chiefly Capacity in his Pre-  
fection.

I shall begin with the good Qualifications of the Outside, of which the Eyes are the  
only and first Judges; for often at first sight we find our selves all of a sudden inclined  
either to a good Liking and Esteem, or Scorn and Aversion for the Gard'ner that offers  
himself.

As for the first Consideration, which is about Age, Health, Shape and Motion, I am  
for a Gard'ner that is neither too Old nor too Young; both Extremes being equally danger-  
ous. Too much Youth is to be suspected of Ignorance and Wildness, and too much  
Age, unless supported by some Children of a reasonable Age and some Capacity, is Sub-  
ject to Laziness or Infirmary. Therefore, in my Opinion, the best Age is from Twenty-  
five to Fifty and Fifty-five, carefully observing, whether the Face denotes any visible Ap-  
pearance of Health, without any evaporated Brain, or foolish Presumption; likewise care-  
fully chusing a Shape and Motion denoting a Sturdy, Vigorous, Nimble Man, not affect-  
ing to be dress'd or adorn'd above the common Station of a Gard'ner; all which Observa-  
tions ought to be believ'd, and I affirm to be very material.

Being satisfy'd with the Exterior part, the Essential Proofs of his Merit must be ex-  
amin'd, to which End a little Conversation will be requir'd with the said Gard'ner.

First, To know the Place whence he comes, the Times he has lived there, and the  
Reason of his leaving it.

Secondly, Where he has learn'd his Trade, what part of Gard'ning he is most vers'd in,  
whether of Fruit or Kitchen-Gardens, or of Flowers or Orange-Gardens. These being the two  
different Clasis of Gard'ning, that appear at present best establish'd.

Thirdly, whether he is Married and has Children, and whether his Wife and Children  
work in the Garden.

And lastly, whether he can Write and Draw; those being, in my Opinion, all proper  
Questions for a Man of Sense to make on such Occasions.

The Gard'ner's Answer to the First, may give us great Light to Judge of his Desert or  
Imperfections, because that if he names several Credible Houses where he has liv'd in  
a few Years Compass, without being able to give good Reasons for his leaving them, it  
will give cause to suspect either his Ignorance or Debauchness.

If on the contrary, he give warrantable Reasons for his so doing, it may be an In-  
ducement to resolve upon the taking of him, after having first made the usual Enqui-  
ries in such Cases, and receiv'd a good Account of his Conduct, from such as are capable  
of giving it, and of whom it is to be expected, provided Malice and Revenge have no  
part in it.

I mean, after having been inform'd, first, of his Prudence and Honesty in his way of  
Living, of his not being insatiably greedy after Gain, of his giving his Master a good  
account of all the Productions of his Garden, without imbezling any part of it, upon any  
account whatever; of his being always the first and last at his Work; of his being neat  
and

and curious in what he does; of his Trees being always well prun'd and cleans'd, his Wall-  
Trees well order'd, and of his delighting in his Gardens above all other things, especially up-  
on holy days; so that instead of debauching and carousing at such times, as it is most com-  
mon for most Gard'ners to do, he may be seen walking in his Gardens with his Servants, ma-  
king them observe what is well, and what is ill in every Place, determining what is to be  
done upon every work-day of the Week, even taking away harmful Insects, and racking  
some Branches that might be broken and spoil'd by the Winds, if it were put off to the next  
day; gathering fine Fruits that might be in danger of being spoil'd in falling; taking up the  
best of what is fallen; Trimming the Buds or useless Branches that offend the sight, and spoil  
the Tree, which had not been taken notice off before.

Those little Cares challenge as much esteem and kindness towards a Gard'ner, as any  
other Testimony he can render; it shews his being well Intention'd, that he has some  
Qualifications, that are but seldom acquir'd, unless they be Natural, viz. Affection, Jealousy  
Curiosity, Neatness and a docible Spirit; and indeed a Garden is generally in a very  
good Case, under the management of such a Man. It generally is the first in producing  
Novelties, it is clean and free from Weeds, the Walks are neat and well level'd, and the  
whole commonly furnish'd with all that can be expected in every Season of the year; hap-  
py are those who can meet with such, and have no cause to complain, as so many other  
Gentlemen daily do, of their ill Fortune upon that Subject.

The scarcity of good Workmen of that kind is not to be wonder'd at, while the num-  
ber of Ingenious Men of most kinds is pretty considerable; the source of the Ignorance of  
most Gard'ners proceeding from their knowing nothing for the most part, but what they  
have seen practis'd, by those under whom they first began to work.

Those kind of Masters had never learn'd elsewhere, nor imagin'd of themselves the rea-  
son of every part of their Work; so that not knowing it, and continuing to work for the  
most part by chance, or rather by rote, they have been no more capable of teaching it,  
than their Prentices of enquiring it; so that perhaps excepting some Skill in grassing and  
couching the Branches of Wall-Trees, in Tilling, the Ground, ordering of a Bed, mowing  
and watering some Seeds, clipping of Box and Palisado, which are all very easy to do  
and learn, and may be learn'd by Boys seeing others do it; I lay, excepting such kind of  
Works which are none of the most material, it may be affirm'd that they hardly know any  
thing, especially as to the main part of Gard'ning, which is the Conduct of all sorts of Trees,  
the beauty and singular goodness of every Fruit, their Maturity well understood, and an  
uninterrupted succession of the Novelties of every Month in the Year, &c.

Indeed they have attain'd the boldness and dexterity of using the Saw and Pruning-knife, the Fine of an  
but never had any Rules or Principles to do it Judiciously; they venture to cut at random, and the  
what they think good; and so a Tree, if I may use the Expression, not being able to oppose  
its Enemies, is mangled and maim'd, discovering its Grievances, by falling into decay, by  
its ill favour'd Figure, and especially by the small quantity of ill Fruit it produces.

This is in reality the common Prenticeship of Gard'ners, or rather the Epidemical Disease  
of all Gardens; I am not ignorant that there are some well meaning Gard'ners, who with-  
out doubt would grow skillful, were they well Instructed; those deserve Pity and Assis-  
tance, and therefore I never fail to assist them in all I can.

I am also sensible that there are some, who either of themselves, or having been brought  
up under a good Master, have both Worth and Capacity, and afterwards are careful of  
the making good Prentices; therefore it is good to have some brought up by such hands, and Master makes  
approved by their Masters.

However, though these Precautions might seem sufficient, I am still of Opinion, that  
before we engage any farther, especially, only wanting a Gard'ner for an ordinary Garden,  
it will not be amiss to find out some occasion to make the Gard'ner you have some Inclina-  
tion to choose, set his hands to some laborious piece of Work, to see how he goes about  
it; as to Till some spot of Ground, to carry some Watering-Pots, &c. by which Trials  
it will be easy to judge whether he has those necessary Qualifications of Body; whether  
he acts naturally, or forces himself; if he be handy and laborious, or clumsy and effemi-  
nate: A man that is soon out of breath, does more than his strength can permit, and  
consequently cannot make a good Workman, I mean, a lasting one; such a man is not  
fit for our turn, unless we barely want one to order and manage, which is not usual, un-  
less in great Gardens, where such a one is absolutely necessary.

Supposing we are hitherto satisfy'd with the Answers and Work of the Gard'ner, who offers  
himself, there are still other very material Qualifications to be wish'd for, as we have al-  
ready mention'd.

First,

First, That he may be able to write a Letter, for though writing be not absolutely necessary in a Gard'ner, yet it must be granted that it is a very considerable advantage, to the end that being absent from his Master, he may be able to receive his Orders himself, give him an account of his Garden, keep a Register of all he does in it, &c.

Secondly, If marry'd, it is fit that his Wife, besides the Care of her Family, may love and be capable of working about her Husband's Trade; it is an inestimable Treasure for the Perfection of Gard'ning, as well as for the good Fortune of the Gard'ner: Such a Wife cleanses, serapes and weeds, while the Master and his Men labour about harder, more in haste, and more material Works; and when her Husband is absent or sick, she calls upon every body to do their duty; she gathers the Legumes and Fruit, of which often a considerable part perishes for want of being gather'd in due time: In fine, she is to prevent a great many disorders, which we observe, where a Gard'ner's Wife does not love to work in the Garden. I am of Opinion that it will be proper to see her, to judge whether such important helps may be expected from her, and see whether she be cleanly, and has nothing disgusting in her. To this I might add, that in many Countrey Houses the Gard'ner is made House-keeper, when his Wife is ingenious and cleanly, which is always of great Use.

Thirdly, It is necessary to enquire the Names of the Masters under whom this Gard'ner has learn'd his Trade; when he cites for a good Master, a Man of known Ignorance, and values himself upon it, it is a sign of Incapacity, though in other things the Prentice may chance to know more than his Master.

There are yet some other Marks by which it may be easie to judge of the Merit of Gard'ners; for instance, I do not like a great Babler, who talks of nothing but his Skill, or affects hard Words, which he thinks are fine, though they really are not so.

Neither do I like him, who without being able to give a good reason for it, values himself upon equally despising what he has not seen, as well as what he has seen, who has so great an Opinion of his Ability, as to think that he can learn nothing new; who thinks he should wrong himself in inquiring after, or hearkening to Men of Reputation; as if this Wretch thereby fear'd to bring his Knowledge in question. There are but too many, who upon the Questions that are made to them, answer with a disdainful Smile. It would be a fine thing if at my Age I did not know my Trade, and thereupon would not for any thing acknowledge their Faults, or be better inform'd.

There are some who always affect to ruin whatever is Ancient in their Garden, and to make perpetual Novelities, and those study to amuse their Masters with some hopes of the future, both to hinder him, in the mean time, from perceiving their Ignorance, for the time past or present, as well as to make their Profit by the Expence incident to new Works.

On the contrary, there are some others, whose Stupidity is so great, that they never imagine any thing, and had rather leave the Gardens they undertake in the same Condition they find them, though never so much out of Order, than alter the least thing about them; who having a great number of ugly Trees, quite decay'd, or squares of Strawberry, Artichokes and Sparagus, &c. no longer producing any thing fine or good, instead of endeavouring to remedy it, which is very easie, will cry that it is enough for them to preserve things as they find them.

These two sorts of Gard'ners are equally to be avoided; those who are continually bragging of their Skill in Grassing, thereby likewise give an infallible proof of their Incapacity as to what relates to the main part of Gard'ning; I am not ignorant that 'tis necessary to graff well, but at the same time I know that a Woman, or a Child of eight or ten years of Age, may do it as well as the best Gard'ners; nothing has produc'd so many Block-heads in point of Gard'ning, as that Skill in Grassing. It is the Nursery that produce so many pitiful Gard'ners, who have, as it were, corrupted and infected all that belongs to Gard'ning, looking upon themselves as being the greatest Masters in that Art, as soon as they can Grass well, and in that belief undertake the Management of any Garden what ever.

There are yet another kind of Blockheads, who cannot speak Three Words of their own Trade, without intermixing the Full and Wainal-Moon. Pretending, and yet knowing no Reason for it, that it is an Observation altogether necessary for the Success of all that belongs to Gard'ning: They really Fancy they can persuade us by such Words, that they are acquainted with all the Mysteries of that Art; so that having said with a Pretentious Haughtiness, in their Jargon, that every Friday bears a Decree, and that Good-Friday is infallible for Sowing and Grassing, for Planting and Pruning, &c. They really think 'tis the greatest Happiness in the World, for any Body to have them for their Gard'ners.

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Dismiss those Gard'ners who boast of knowing what they are Ignorant of. Xenophon.

I fully examine in my Treatise of Reflection what relates to those Visions, which in point of Gard'ning I really look upon to be as Ridiculous as Old; therefore I always suspect those talkers of Decree, who are Dumb upon the least difficulty propos'd to them upon such Maxims, their sole Answer being, that in this they follow an Opinion in Vogue all the World over.

I think I have been pretty Exact in the Observation of the Good and Ill Qualifications, that are commonly met with among Gard'ners; now in my Opinion it will not be amiss, especially in Relation to those who know but little, to enjoin them to study Carefully in order to improve themselves.

As to those who have Skill and Capacity, I conjure them with all my Heart to continue to perfect themselves, thereby more and more to deserve the Favour of their Masters, if good ones, if not, to deserve better.

I find my self very much inclin'd to oblige all those who are desirous to learn, either in assisting them with some Instructions in those parts of Gard'ning, they are not sufficiently acquainted with, or in Procuring them good Places, in considerable Houses.

As on the other Hand to Despise, and render no manner of good Offices to such as have none of those good, and altogether necessary, Qualifications.

Lastly, in order to ease the Mind of a Master who wants a Gard'ner, if he himself be not Ignorant of the good Maxims of Gard'ning, in my Opinion he cannot do better than to Examine the Gard'ner, who comes to offer his Service, upon all the principal Points of Culture, being perswaded that commonly those who are work-Men, can speak Indifferently well as to their Trade; and consequently that it is a very ill Sign, when they cannot speak three Words to the purpose about it.

Not but that there are some People who can work better than Talk, and some who naturally have more Facility to express themselves than others; but in this Case, we look first for Gard'ners, not Orators; and in the second Place expect no Eloquence, only some marks of a Necessary Capacity, both to be satisfied that a Garden will always be in a good Case, it being in the Hands of a good Gard'ner, and to hope for the Satisfaction of having sometimes the Pleasure of discoursing about Gard'ning, and to propose Questions upon the Matter occurring. A judicious Man can never want Capacity to Judge and Distinguish in such a Case, what may be good, or indifferent for his Use, and of being satisfied with what Reason and his Occasions may require of a Gard'ner, without looking farther.

No Gard'ner can be good unless Skillful and Ignorance is the greatest Defect he can possibly have. Xenophon.

The End of the First Part.



OF  
FRUIT-GARDENS  
AND  
Kitchen-Gardens.

VOL. I. PART II.

I Am particularly to treat here of Four Things: The first relating to the Advantages to be wish'd for, in order to make *Gardens*: The second relating to *Earth*, in respect to those *Gardens*: The third, to what is proper to Correct the Defects we meet with in *Gardens* already made: The fourth, to the manner of *Cultivating Gardens*, together with such Qualifications of *Soil*, as are proper for every particular Kind of *Fruit*.

I will speak of what relates to the first Article, after having first declar'd that I am only to treat here of *Fruit* and *Kitchen-Gardens*, whether they be *City Gardens*, which commonly are but of a Moderate Compass: The Ground of considerable Cities being too precious to employ much of it in *Gard'ning*, or *Country Gardens*, which for the generality are pretty large, at least much larger than those of Cities, and that in proportion to the Abilities of the Master, and Stateliness of every House.

I am sensible, that for the generality, both *City* and *Country Gardens* are made for the Convenience of the Houses, and therefore should be pretty close to them; yet considering that those of the Country require a pretty large Extent, in order to yield considerably, being necessary for Sustainance, as well as Pleasure: In my Opinion, it were to be wish'd that the Houses were built for the *Gardens*, and not the *Gardens* made for the Houses. I mean, that one of the Chief Considerations in the Choice of the Situation of Houses, should be particularly to pitch upon a proper Place to make fine and good *Gardens* with Ease, which however is but seldom minded. There are other more prevailing Considerations most People fix upon: For Instance, a fine Prospect, the Neighbourhood of a Wood or River, the Convenience and Pleasure of Hunting, the Facility of making Fountains or Canals, the Advantage of the Income, or some other Consideration of the Adjacency of Friends, &c. So that the *Gardens* in Question are commonly the last Thing thought upon,

and

and consequently much more the Works of Nicety and After-thought, than of Choice or Forecast.

And indeed it is much more common to become Master of a House ready Built, either by Purchase or Succession, &c. than to chuse the Situation, and begin to lay the Foundations of it; so that generally People are necessitated to make such *Gardens* as the Dependencies of their Houses will allow, which is the Reason they are not commonly so good as they should be.

But supposing a Man were in a Condition to chuse, I will take the Liberty to explain here what I think most proper to be done, to succeed in the choice of a *Garden* for a House, as I would willingly do as to the Choice of the Situation of that House, were this a proper Place for it.

C H A P. I.

Of the Conditions that are necessary in order to make a Good Fruit and Kitchen-Garden.

I Find in this seven particular Considerations, and all of them, in my Opinion, very material.

*First*, I would have the *Ground* good, whatever Colour it were of.

*Secondly*, A favourable Situation and Exposition.

*Thirdly*, An easie Conveniency of Water, for watering.

*Fourthly*, To have the *Ground* upon a small rising.

*Fifthly*, An agreeable Figure, and well plac'd Entrance.

*Sixthly*, A fine Enclosure of pretty high Walls.

And Lastly, That in case this *Garden* were not within sight of the House, which is not always to be wish'd for, at least it might not be far distant from it, but above all, that the Access to it may be easie and convenient: Let us now explain those seven Articles a-funder, in order to shew whether my wish be grounded upon sufficient Reasons, and whether the Execution of it be material.

C H A P. II.

Of Earth in General.

I N Order to prove what *Earth* is, not taking in a Philosophical or Christian Sence, whereby is understood the whole Mass, this not being a question proper to be decided in this Place: It is sufficient to know, *Earth* being considered in that Sence, that it is a great round Mass, which forming one part of the created World, is Situated in the middle of the Celestial Sphere; where, by the Orders of the Creator, it sustains it self, as it were by its own Weight.

But to take *Earth* in the Sence of a good *Husbandman*, or a *Gard'ner*, to be able to Explain what it is in relation to all the small Particles that compose it, and the *Culture* it receives from the Hand of Man.

In that Sence, I think, I may say, that *Earth* is a quantity of a certain kind of small Sand, which by the Operation of a certain Salt, wherewith Nature has endued every Grain of that Sand, is proper for the Production of *Vegetables*; in order to which there must be several Grains together, which receiving a temperate Moisture, form a compacted Body, which afterwards receiving some degrees of moderate Heat, seems to compose an animated Body: So that without these two helps of Moisture and Heat, this *Earth* remains useless, and as it were dead. 'Tis almost in the same manner that *Flower*, which is an entire Body, composed of an Infinite Number of small Particles, all well separated the one from the other; this *Flower*, I say, being moistned to a certain degree, forms Pulse or Pap, either of which being season'd with a little Salt, and afterwards heated to a certain degree, become proper for the Nourishment of Man; whereas this *Flower* would remain useless or dead, if Water, Salt and Fire were not introduc'd to Animate it. However, we find this difference between *Earth* and *Flower*, that the last being once wetted, alters its nature to that degree, that it cannot return to its first Condition, although the Moisture be altogether drain'd out of it,

D

whereas

whereas on the contrary, *Earth* having once lost the Moisture it had receiv'd, remains in the same Condition it was before, when it receives a second Moisture; but yet this difference ought not to destroy our Comparison.

The Reason that induces me to say that *Earth* is a kind of Sand, is, that in the handling of it, it really appears a sandy Thing; I will not take upon me to explain what Sand is, since I can say nothing that is particular about it, nor new, I shall only say in General, That there are several kind of Sands, of which some are very dry and barren, like those of the Sea, Rivers, Sand Pits, &c. others Fat and Fruitful, some more, some less: Those that are Fatteft and most Fertile, make the best *Earth*; the others that are not so Fat, or have no Fatness at all, make but ordinary or bad *Earth*, especially such as are Light, Dry and Sandy: Moreover some are softer, which make soft easie *Soil* or *Mould*; others courser, which make a rough Loam, hard to be manag'd. In fine, some are Unctuous and Sticking together, of which those that are but moderately so, make strong *Earth*; others that are more inclining to it, make clean Loamy *Earth*, and those that are extremely Unctuous, make clayish and heavy *Earth*, altogether unfit for *Culture*.

Besides the difference of Sands, in Relation to Fruitfulness and Barrenness, there are others which only differ as to Colour; for among Sands some are Blackish, others Reddish; some are White, some Grey and others Yellow, &c. from whence *Earth* derive the Names of Black, Red, White, Grey, &c. But those kind of Colours are not very Essential to the goodness of *Soil*, as we shall demonstrate hereafter.

It is most certain, that those Fertile Sands have really some Qualities in themselves, or rather a certain fruitful Salt, which is communicated to the Water that Moistens them, which being season'd by these Qualities, must serve for the Production of *Plants*. Just in the same Manner as *Senné*, *Rubarb* and most *Plants* have in themselves Medicinal Virtues and Properties, which communicate themselves to the Water into which they are Infus'd, for the Use of the Health of Man, &c. which Truth is undeniable.

I might assert here in the first Place, that *Earth* (considering it in it self as one of the Four Elements) has really no Original or Natural Disposition for *Vegetation*, being in its principal Qualities Cold and Dry, whereas *Vegetation* requires Heat and Moisture; but as by the Express Order and Command of Divine Providence, it finds it self endu'd with a Salt necessary for Fertility, and is afterwards assisted both by the Rays of the Sun, and Subterraneous Fires which give it heat, as well as by some Waters that moisten it, it seems to change its Nature; so that, in Submission to so absolute a Command of the Sovereign Master, it appears as if it were a living animated Being, a Being, having its particular Activity, that is, of Producing, as if in Effect *Plants* were no more in relation to it than the Teeth of an Animal are in relation to that Animal: I mean, that as it is the Animal that Lives, and not the Teeth; so it would be proper to say, that the *Earth* lives, and not the *Vegetables*. This *Earth*, I say, in Obedience to that Command, makes that vast number of different Productions we have so much Reason to admire.

I might say, Secondly, That there was a second Command, after the Curse occasion'd by the Disobedience of Man, and that by Virtue of that second Command, that *Earth* seems most inclin'd to produce ill *Plants* or *Weeds*; so that this very Man having for his Punishment receiv'd a particular Order to Cultivate that *Earth* for his Subsistence, he finds himself in some manner necessitated to wage a perpetual War against it: He Labours and makes use of all his Industry to Vanquish and Overcome the malicious Inclination of that *Earth*, which on its part defends it self with all its Might, to avoid, deceive and cross the Subordinate Authority of that second Master.

And so we see, that being no wife inclin'd to favour Children that are in some manner Strangers to her, which by *Culture* we make her produce against her Will. She relapses as soon as the can, shooting vigorously *Thistles*, *Nettles*, and a Thousand other *Plants* of no Use to us, which are properly her natural welbelov'd Children.

In this the *Earth* resembles those Children who are seldom tired with Voluntary Games and Sports, though never so Rough or Violent in themselves, and yet appear soon weary in the performance of what a Superior Authority enjoins them for their good, though never so easie in the Execution.

Thus then, this *Earth* is oblig'd to obey in a great many Things, which Man requires of it, in which perhaps it might be compar'd to a young Colt, Vigorous and Obolinate, which being once subjected to the Hand and Spur of an able Rider, becomes subservient for Pleasures, Combats and Triumphs, &c.

Thirdly, I might say, that all sort of *Soils* are not proper for all Sorts of Productions, so that every *Climate* seems in some Sense to be reduc'd to some particular Thing, which it produces happily and with Ease; whereas other *Plants* cannot succeed in it, without much

Toil

Toil and Care: It is in this point that Man stands in need of Industry, nay even of Obstinacy, finally to overcome the Resistance he meets with sometimes, in the *Culture* of his Ground.

Those happy or unfortunate Successes of *Plants*, in certain Places ought to inform us demonstratively, what kind of *Earth* is absolutely fit for every sort of *Fruit*, and which is improper; for Instance, the large *Cherry Trees* of the Vale of *Montmorency*, and the fine *Plum Trees* of the Hills of *Mendon*, &c. Instruct me what *Soil* is proper for *Cherries*, and what for *Plums*, &c. I should engage to the rearing of them in *Soils* of a different Temper, with Confidence and Presumption of succeeding without difficulty.

I might finally say what is known by every Body, that some *Earths* are much better than others in every *Climate*, nay even sometimes in a small Compass of *Ground*, vulgarly term'd *Veins* of *Earth*: For Instance, *Wheat* grows well in one Place, and yet cannot grow in another close by it, where the *Ground* is only fit for *Rye*, or other small Corn. *Wine* proves good in one Place, and is not so in another, tho' close by it. *Muscadine* ripens perfectly well in some, and in others neither acquires Taste, Firmness, Colour, &c.

From whence it follows, that it is very difficult to give general and positive Rules for every *Climate* in general, considering the great Proximity or Nearness of good *Soil* to bad.

So that we say in respect to the Production of *Earth* in every *Climate*, that some are extraordinary good, that is, very Fertile, as we have often cause to say, in respect to the said Production, that some are very Bad, that is, very Barren: This difference proceeding apparently from the Internal Qualifications of every *Ground*, since it cannot be imputed to the *Sun*, which looks upon them all with the same Eye; it may likewise proceed from another Cause, which we will demonstrate hereafter: But, in fine, our *Gardens* absolutely require *Earth*, therefore let us now examine what Conditions are necessary to that *Earth*, in order to make our *Garden* thrive.

## CHAP. III.

Of the Conditions that are Necessary for the Earth of a Garden, to Qualifie it to be good.

Many Things are to be said in relation to *Earth*, which are necessary to be understood; I will speak of each in particular without omitting any Thing of what I know; but whereas we have establish'd heretofore, that the first and most essential Thing to be desir'd, for *Fruit* and *Kitchen-Gardens*, is a good *Earth*, it will be proper first to Explain what a good *Soil* is, to the making of which many Things must Concur.

First, Its Productions must be Vigorous and Numerous.

Secondly, That *Earth* must be able to recover it self with ease, when it has been worn out.

Thirdly, It must have no ill Taste.

Fourthly, It must have at least Three Foot Depth.

Fifthly, It must be clear from Stones, and easie to Till.

Sixthly, It must neither be too Moist, nor too Dry.

I explain these Six Maxims in Six particular Sections, before I enter upon the other Necessary Conditions for the Perfecting of a *Fruit-Garden*.

## First SECTION.

Of the First Proof of good Earth.

In my Opinion, the best Proof of a real good *Ground* or *Soil*, is chiefly when of it self it abounds in very vigorous and numerous Productions, appearing seldom or never Exhausted: When *Plants* grow visibly, with large thick *Leaves*, &c. When *Trees* grow up in few Years, producing fine *Shoots*, green *Leaves*, not drooping until the great Frosts come in, having fine, lively, shining *Barks*, &c. These Marks are certain Proofs of a good *Earth*.

Quid faciat la-  
tas fegetes, &c.  
Virg. 1.

## SECTION II.

## Of the Second Proof of good Earth.

Besides this, the Nature of this *Soil* must be such, that it may easily repair what has been impair'd by some Extraordinary Accident, viz. by a great Heat, or a great Cold; by a great Drought, or great Moisture; by a long Nourishment of some Foreign *Plants*, &c. so as easily and certainly to recover its former Goodness, if left in quiet, and, as it were, abandon'd to it self; which supposes that the Accidents that had troubled it in its ordinary Productions ceasing, the goodness of its Nature, and particularly its happy Situation, are apparently the principal Causes thereof; which is so true, as to that Situation, that such a *Soil* being admirably good in such a Place, will soon cease to be so, if carried into another, where it may not meet with the good Fortune of such an advantageous Situation: Whereas, on the contrary, if Barren in some Place, being Transported into another, where the Situation happens to be better, it will undoubtedly prove much better in its Production there.

This is the Reason that Transported *Earth*, though never so good in the place whence it was brought, only has a Transitory Goodness, and will soon cease to be so, not meeting with a proper Situation, in which case it will require extraordinary Helps to be maintain'd in a Fruitful Condition.

Therefore we may lay down as a certain Maxim, that no *Earth* can be call'd good, unless it shows a great Fertility by its natural Productions, and be capable to recover it self without help. Those are the *Earths* that are absolutely necessary for *Gardens*, without amending our selves in hopes of correcting a natural Barrenness absolutely, by laying out a great deal of Money, in *Dunging*, &c. especially in Relation to *Fruits*; as for *Pot-herbs*, I grant, that having abundance of *Dung* and *Water*, together with several Indefatigable Gard'ners, they may be made to grow in a common *Soil*; but that Remedy is too Expensive, and the real Pleasure of a *Garden*, is inconsistent with so much Toil and Charge.

## SECTION III.

## Third Proof of a good Earth.

Moreover, in my Opinion, the real Goodness of *Earth* consists in having neither Smell nor Taste; since it would be Vain for our *Fruits* to be the Children of a very Fruitful *Soil*, and to be large and beautiful; if, at the same time, that *Soil* had any ill Smell, or ill Taste, by Reason that the *Fruits* and *Legumes*, or *Edible Plants*, will infallibly be tainted with it, and consequently cannot be good or palatable, which is their main Excellence.

The Example of those Wines that taste of the *Soil*, is a convincing Proof of this Truth, it being most certain that the *Sap*, which is prepar'd by the *Roots*, is only made by the *Water*, which soaking in the *Ground* where those *Roots* are to Work, of necessity participates to the Taste and Qualities of that *Soil*, and still retains them, notwithstanding its being turn'd into *Sap*.

*Earth* to be good, must be altogether like good *Water*, that is, that without being Tart, or Insipid, and Sweetish, it must have no manner of Smell whatever, neither Good nor Bad.

This is the first and most material Observation to be made, in order to Resolve and Determine upon the *Ground* of a *Garden*, when it appears Fertile; which Observation is very easy, since every Body is capable of making it, either in Smelling barely to a handful of that *Earth*, to judge of the Smell, or in tasting the *Water*, in which it shall have soak'd, to judge of its Taste. For Example, leaving some small Quantity to soak for Five or Six Hours in a Glass, which being afterwards drain'd through a clean Cloth to remove all Hours in a Glass, which being afterwards drain'd through a clean Cloth to remove all Suspicion of Dirt or Uncleanliness, may be tasted, to judge by its good or ill Taste, of Stink and Tartness, or Pleasantness and Sweetness, whether that *Ground* may be proper to produce good *Fruits*, in order to resolve upon the making or not making a *Garden* there. It is impossible to be too Nice in point of Taste; *Legumes* do not require quite so much nicety, by Reason that most of them, in the boiling, lose whatever might be disagreeable in their Taste.

## SECTION

## SECTION IV.

## The Fourth Proof of good Earth.

Though it might seem sufficient in order to judge of the Goodness of *Earth*, to find its Production Vigorous, and that it does not grow weary of Producing, as also that it has no manner of ill Taste; yet notwithstanding the Knowledge of our Curious, who will make a *Garden*, must extend farther: It is necessary to found the Depth of the *Ground*, and to dig into its Entrails, to see whether it contains, at least, Three Foot of as good *Mould* as the *Surface*. The *Tress* he shall plant there will not grow so easily as those which Nature has produc'd of it self; they will not thrive, unless they be, as it were, certain of a Provision of Food for the Time to come, which Provision consists in having Three Foot of good *Mould*, very soft or labourable on the Top; and whereas by daily requiring some new thing from that *Earth*, it is tired at last, and grows Lazy and Lean in its Productions, it is necessary to make some Alterations; the most material of all which, as well as the most easy, is to lay the *Mould* that lay in the Bottom on the Top, where not having had any Thing to employ it, it preserv'd its natural Fruitfulness, in Expectation of being put to Tryal, that is, of being Expos'd to the *Sun* and *Cultivated*; in which Motion of the *Earth*, the *Surface* is turn'd in the Room of the other, which was taken up there to lay at rest in its Turn, in order to come to it self again in some Years Time, and to be put into a Condition of acting again as well as ever: Not unlike those Animals, which, though never so tired at the end of the first Day's Journey, go on the next Day with the same Vigour as before, provided they have Rest in the Night.

It is not enough to have laid down as a Maxim, that *Trees* absolutely require Three Foot in Depth of good *Mould*, it is necessary besides to decide how much will be proper for long Rooted *Legumes*: For Example, *Artichokes*, *Beet Roots*, *Scorzenero*, *Parsneps*, *Carrots*, &c. all which, in my Opinion likewise, require the same Depth of Three Foot. Other *Plants*, as *Sallads*, *Greens* and *Cabbage*, &c. may do with a Foot less. But those among the *Cucurians* who, in both cases, of *Trees* and large *Legumes*, are satisfied with less Depth than I have Instant'd, are certainly in a very great Error, and are to be pitied, or rather blam'd. They will be liable to have abundance of *Trees* grow Yellow and Sick, and to see a considerable part of them Perish, and consequently will be obliged to a new Expence, to plant others at a Time when, after Five or Six Years Patience, they ought to Enjoy the Benefit of their *Plants*. And lastly, they will be Expos'd to have small *Trees* and *Legumes*, and those neither good nor come to perfection, &c. Which Inconveniences ought to be avoided, by following of my Precepts in chusing of a sufficient Depth.

## SECTION V.

## The Fifth Proof of good Earth.

The Natural and Perpetual Fertility of *Earths*, their Taste and Depth, being thus establish'd as Four indispensable Conditions, there remains a Fifth, which is, That *Earth*, without being too light, ought to be easy for *Cultivation* (like those we call *Fat Sand*, or *Flax Land*, &c.) and pretty free from Stones, not only for the Ease of *Culture* and to make *Plants* grow the easier, but also to please the Eye, which undoubtedly is offended at the sight of many Stones or Rubbage in stirring of the *Ground*: So that when any *Earth* has that Imperfection, it must be remedied, when there are but a few, they may be easily clear'd with a Rake; but when the *Ground* is full of them, I know no Remedy but sifting of it. I explain the Use of that Operation in the Treatise of the Preparations of *Soil*.

Light *Mayds* have great Advantages for *Culture*, they are convenient to *Plants* for the Multiplication of their *Roots*, they easily drink the *Water* of Rains, and Waterings, and yet preserve Moisture enough for *Vegetation*; besides they are easily heated by the Beams of the *Sun*, and consequently are quick in their Production, which is particularly desir'd by every Body.

*Optima putri  
arva sile: id  
quæ curant ge-  
lidæque pruina,  
& labefacta no-  
vens rebus ju-  
gura sifer.*  
Georg. 2.

## SECTION

## SECTION VI.

## Sixth mark of good Earth.

The best way to know easie *Mould*, is to compare it with other *Earth* that is not so; for Example:

*Earth* that is too strong cuts with the Spade like loamy or stiff Ground, which are apt to close and grow hard, to that degree, that it is almost impossible for Rain, or Waterings to penetrate or soak into them, which is a very vexatious and most pernicious Inconvenience for *Culture*; besides, they are naturally inclin'd to rottenness, and are cold and backward, preferring a continual moisture in their bottom, three of the worst Qualifications *Earth* can have; the surface of them easily splits and parches in great heats, insomuch that they are incapable of receiving the least *Culture*, and consequently are neither fit for new *Plantations*, or to receive new *Seeds*, which occasions a great scarcity in most Seasons; besides, those cranyes are very prejudicial both to *Trees* and *Plants*, having already taken new *Root*, by uncovering the *Roots*, breaking the new ones, and hindering them from continuing their Functions.

It is impossible to be better inform'd than I am, with all the disorders that attend such Soils, and with all the Inconveniencies they cause in *Culture*; and therefore I think it will not be improper for me to make a short Relation, by the by, of what I have been oblig'd to do in the *Kitchen-Garden* of *Versailles*; of which the *Earth* is partly of the Nature of those, which it were to be wish'd, might not be met with any where, and which we would not have there, had it been easie to bring better in the room of it. The Necessity of making a *Kitchen-Garden* in a Situation proper for Walks, and the King's Satisfaction, oblig'd us to pitch upon that Place where it is; and the difficulty of meeting with extraordinary good *Earth* in the adjacent Parts, necessitated us to be satisfied with such as was passably good.

This *Kitchen-Garden* is in a Place, where there was formerly a large and very deep Pond; we were oblig'd to fill up the Place of that Pond, and raise the Surface of it even above that of the Grounds about it, otherwise it being a Marsh, and the sink of the neighbouring Hills, it would never have succeeded for the use it was design'd to: we met with no great difficulty in the filling of it, by means of the Sands we were oblig'd to dig out to make the adjacent Canal, of which we us'd ten and twelve Foot in depth every where, but yet the difficulty of meeting with proper *Mould* to lay over those Sands, and to have it speedily, together with the Expence and Time for the distant Transportation of the great quantity that was necessary for the surface of near twenty five Acres, or Furlongs, were capable to discourage any body from the Enterprize; therefore we were oblig'd to take that which lay nearest to us, that is from the Mountain of *Satory*: I examin'd it upon the spot, and found that it was a kind of loamy Ground which turn'd to Pap or Mortar, when after great Rains the Water remain'd long upon it, and look'd as if it had been petrify'd when it was dry; I likewise perceiv'd that common Showers did not easily soak into it, which troubled me much, but I imputed the cause of it to a kind of white Sand, or soft and chalky Stones, which was found upon that Mountain at the second spit deep of the Spade, and comforted my self in hopes of meeting with a Remedy against it, by means of the Sands, upon which that *Earth* was to be plac'd; upon that Foundation I dispos'd the ground of this *Kitchen-Garden* in such a manner that the *Earth* of the surface might lay upon a level, without any declivity, as commonly most *Gardens* are; but I was extremely surpris'd when I found the contrary of what I expected; this *Earth* in changing of Place, did not change its Nature, it remain'd impenetrable to Water; that which happen'd most favourable to me in this, was, that I was expos'd the first year to the greatest mischief that could possibly befall me, there falling such great and frequent Showers of Rain, that the whole *Garden* seem'd to be turn'd into a Pond, or at least into a puddled Marsh, which was inaccessible, and above all, Mortal, both for the *Trees* that were root'd up, and all the *Kitchen Plants* that were overflow'd by it: A Remedy was to be found suitable to so great an Inconvenience, otherwise the great work of the *Kitchen-Garden*, the Expence of which had made so great a Noise, and the Figure whereof afforded so much Pleasure, should have been of no use: Happily in causing this same *Garden* to be made, I had at the same time also made an *Aqueduct* that went a cross it, in order to receive all the Waters of the Hills, which were wont to fall into that very Place to supply the former Pond, and were necessary to fill the great neighbouring Canal; therefore I bethought my self to order Matters so, that those Waters which were so pernicious to me, might lose themselves in that great *Aqueduct*, to which end I thought my self oblig'd to raise every Plat or

Square

Square into Ridges, which Remedy was good, but would have been violent, had I been forc'd to get new *Earth* for that Elevation; in order to perform this with more ease, I made use of long *Dung*, of which I was very well provided, as well to place it underneath, as to mix it with the *Mould* design'd for *Legumes*, which answer'd my Expectation. The Success prov'd good, and the Charge inconsiderable; in forming of this Work, I allow'd every Square an imperceptible Declivity to lead or carry all the Waters sliding down from all the parts so rais'd into one of the Corners; and caus'd a small Stone Gutter to be made at every Corner, to carry those Waters into the *Aqueduct*; and was not long before I found the benefit of that Invention; my Squares with their *Plants*, and my Borders with their *Trees*, being thereby preserv'd according to my Wish; besides, it contributed considerably towards the Preservation and good Taste of all the things that I could rear there.

This manner of Ridges appear'd at first surprizing by its Novelty, but yet it had the good Fortune to please the King, whose Penetration and Judgment are infinite in all things; What Honour, and what Joy for me to have the Approbation of so great a Prince! He judg'd that the Invention was no less agreeable than new, so much the rather, because it was of the greatest use imaginable; besides, it added three Acres to the first surface of the *Garden*. I do not question but this Method of Ridges will be imitated in all Places where the *Earth* shall be either like ours, or liable to the Inundation of great Rains, or naturally too Marthy.

But when People have no Inclination to make such Elevations, they must at least resolve to have recourse to frequent *Tillages*, to avoid the Inconveniencies that attend Soils that easily Chop in the time of great long heats, it being a very good and infallible Remedy.

## SECTION VII.

## Seventh Mark of good Earth.

We have now seen the Inconveniencies attending a *Soil* that is too ponderous, or too fat, and too strong, and have found a Remedy for it; on the other hand, those that are too light, and consequently dry, are accompany'd with so many difficulties, that they are capable wholly to disgust the Curious.

First, By the difficulty of a necessary Remedy: Secondly, By the necessity of great and frequent *Waterings*, which are very chargeable, and without which the *Earth* grows, or remains *Barren*: Thirdly, By the small Progress of *Fruits* and *Legumes*, there during the *Summer*, without extraordinary helps: Lastly, by the small number of *Vegetables*, that can agree with it in our *Gardens*, in which notwithstanding it is necessary to have them of all kinds to be fully satisfied.

Let us now consider what relates to those *Soils* that are too dry and light, and let us examine whether it be possible to correct those defects.

It happens often that *Earth* is dry and light, because Nature at first formed it in that Temperature, such is that of *dry Turf* in certain *Fens*, such is the *Sandy Soil* of the Plain of *Grenelle*; it is pretty difficult, tho not impossible to render them more Ponderous and Fat, which is only to be done by mixing abundance of other strong *Earth* amongst it, or by making of a way for a considerable discharge of Water towards the Bottom, which might spread all over it, which is not very practicable; sometimes this drought and lightness proceed from its lying upon a *clear Sand*, especially when it lies too shallow, and consequently has not a Bed sufficiently solid, and close, to stop the Waters that fall upon it, either by *Rain*, *Snow*, or other ways; those Waters easily penetrating the Body of those *Soils* descend to that Sand, which being as it were, a kind of Sive lets them pass, and go down lower, as to the place of their Center, whither their weight inclines them, and so no *Moisture* or *Coolness* is preserved on the Bottom of that *Earth*, from thence to be Communicated to the superior parts; and consequently that *Soil* still relapses into its Natural *Driness* and *Barrenness*, since it cannot produce any thing, unless it be at once accompanied with some *Moisture* and *Temperate Heat*.

Those that are at liberty to choose their *Ground*, will hardly be so ill advis'd as to pitch upon one that is so defective; but when they are indispensably oblig'd to it, three things must of necessity be done.

The First is to remove as much of that *Clear Sand* as will be necessary to form that depth of three *Root*, filling it up afterwards with as good *Mould* as can be conveniently got.

*Castalopus  
rui male pin-  
guis areat.  
Georg. 1.*

The Second is to keep all those Places that are to be Cultivated a little lower than the Walks, to the End that the Waters which falls into those Walks, may altogether incline and run into that Ground.

The Third and Last is to throw into those Cultivated Plats, in the Winter, all the Snow that lies in the Walks, and other Parts, from which they may be easily brought, which will make a Provision of Moisture in the Bottom of that Ground, to help it to perform its Functions during the great Heats of Summer.

I have always us'd those three Expedients, and have prevail'd with my Friends to put them in practice; and I attest with Truth, that we have all found a great Benefit by it, and that it is very safe to put them in practice.

No Body can be Ignorant, that when there lies Water at a moderate Depth within the Ground; for Instance, about Three Foot deep (which is common at the Bottom of Vales, where there lies what we call a good Black Sand.) No Body, I say, can be Ignorant, that in such a Case a Natural Philtration or Disfillation, forms it self in the Depth of that Earth, which raises part of that Water up to the Surface, which preserving or maintaining the Earth in a good Temperature for Production, makes it extraordinary good; whereas on the Contrary, that Water lying in a great quantity too near the Surface, for Example, within a Foot or somewhat more, being hindred from descending lower, and thereby occasions too great a Moisture in the Earth; so that unless a Discharge be made of those Subterraneous Waters, or that the Ground be rais'd Ridgewise, as I have heretofore Explain'd, in order to make those Waters rise, such Soil will of Necessity grow Cold, Rotten, and, in a Word, stark Nought.

And, indeed, we may assure our selves, that the Moisture of Soils often proceeds from that Cause, as well those that are very Excessive as those that are not: That Moisture proceeds sometimes from other Causes, as we shall declare in the Sequel.

I think my self oblig'd to say in this Place, that in Relation to the difference of Earth, either Strong and Fat, or Dry and Light, this Distinction is to be made, that in Cold Countries light Earth is most to be desir'd, to the End that a small Heat may be able to warm it; whereas pretty Stony and Fat Soil is best in Hot Countries, Heat not penetrating so easily into the Bottom of it, or drying up the Plants. The Prince of Poets, who was Originally of such a Country, seems to approve a Fat Earth even for Vines; but 'tis only in respect to Abundance; for as to the Goodness and Delicacy of the Vine, he speaks in a different manner, shewing, that Light, Lean Mould is most proper for good Wine, as Loamy Ground is for Wheat.

There are some Soils of so equal a Temperature, and so advantageous a Constitution, that all manner of Legumes and Trees of any kind whatever succeed incomparably well in them; nay, which is more, those kind of Soils receiving but a common Culture of ordinary Labour, or stirring of the Ground for Fruit-Trees, preserve themselves good for many Years, without the Assistance of any Amendments, unless it be for Legumes.

Happy are those who light upon such, when they are about making of a new Garden, so as to be able to boast that in their Grounds they meet with all the Important Conditions I have mention'd, viz. a Fertile Soil, without Taste, sufficiently deep, moderately light, and pretty free from Stones, neither too strong and moist, or too light and too dry, because they may assure themselves of an Infalible Success as to the Ground, and consequently what is it they may not expect, taking care from time to time to have it search'd, and absolutely turn'd within the Depth heretofore mention'd, as well to be certain of its being still in the same Case every where, as to enable every part to perform its Duty alternately, not failing, besides this, to allow it the common Culture it requires.

I have had the Honour of making one of the best Kitchen-Gardens that could be, for a great Minister; I had the Liberty of chusing my Ground, and found it according to my wish, and as I wish it to all Gentlemen that are Curious in Gard'ning. This Garden is so perfect, that no Inconsiderable Things are seen in it, nor any Thing that belyes its Excellence. No Place can afford more vigorous Trees, or more excellent Fruits, nor in greater Quantity, nor finer and better Legumes. There is but one thing wanting in it, which is, that it is not altogether so forward as Gardens that lie in a Sandy Ground; but that Defect, which Art cannot correct, is sufficiently recompen'd by all the other Advantages I have mention'd.

At que pingui  
lumus, dulcique  
uligine late,  
quoque frequen  
horis & fertili  
where campus.  
Georg. 2. &  
paulo post.  
Hic tibi praevo  
lidas olim, mal  
toque fluentes  
sufficit Baccho  
vires hic fer  
tilis uva, &c.  
Georg. 2.  
Denſa, magis  
Cereis: rarissi  
ma quaeque  
Lycæ  
Et superhis  
Alter a frumen  
tis quamquam fa  
cet, altera linc  
cho. Videm  
Georg. 2.

## CHAP. IV.

Of the other Terms that are us'd in speaking of Earth.

AFTER having explain'd the good Qualifications that are to be wish'd for in the Mould of Gardens, I might now apply my self to the Explaining of the other Conditions that are necessary for the perfecting of the said Gardens, viz. The Situation, Exposition, Figure and Conveniency of Watering, &c.

But whereas in our Gardens we often speak of worn out or Exhausted Earth, of Fallow Earth, of new broken up Earth, of Transported Earth, &c. I think that before I proceed any farther, it will be proper for me to declare my Opinion thereof.

## SECTION VIII.

## Of Exhausted Earth.

First, It is an old saying, that Earth wears out or exhausts in process of time, whatever quantity of Salt it may have to preserve its Fertility, that is, though never so good in its Nature, with this difference only, that whereas some are extraordinary Good, and others very Indifferent, some are much sooner, and much easier worn out than others: We may in some measure compare them to the Treasures of every State; of which some are certainly very considerable, and others not; whereby some are more able to sustain long Wars, and bear greater Expences than others; but yet the Treasures of the Richest cannot hold out for ever, they not being Infinite. They may be Exhausted or Wasted, either by being ill Manag'd, or ill Employ'd, or by being Dispers'd, or Squander'd away, though perhaps with a Prospect of other Advantages for the Benefit of the State. Foreign Amendments are sometimes necessary to that State; for Example, great Trading, a Considerable Alliance, &c. and chiefly no long Wars, or great Dissipations. It requires at least some Rest and Oeconomy, or good Husbandry. In the same manner whatever Fruitfulness Earth is endu'd with, it will waste at length by the Abundance of its Productions, I mean such as have been forc'd upon it, but not those that are natural and voluntary, wherewith it seems only to sport; for Instance, the Ground of a good Meadow is so far from wasting, by the Nourishment it affords the Grass it yearly produces, that it improves in its Disposition of producing it, as if it delighted in following its natural Tendency; but when we go about to alter its Function, and force it to produce Saint Foin, Wheat, or any other Corn that is a Stranger to it, it will be soon perceiv'd, first, that it begins to slacken in its Production, and finally Exhausts or Spends it self, in so much, that it will want some help to be put again in Vigour, otherwise it will remain for a time almost useless. It may be also, that the Ground, where Wheat and other Corn grow of themselves (for it is very probable, that those first Grains grew naturally and without any Industry in some Soils.) It may be, I say, that those Corn Grounds might be worn out sooner in producing of Hey, than in the Continuance of their Natural Productions: So that it is Evident by the Experience of all Husbandmen, that Earth frequently wears out or exhausts.

I add, that according to the greater or lesser quantity of Salt, every particular Plant requires, all Plants not consuming an equal quantity of it, that Earth which is abundantly provided therewith, without wearing out so soon, several different kind of Plants, and sometimes all of them together and at the same time, witness the good Grounds of Meadows, every part of which abounds with an Infinity of different Plants, all equally Vigorous: Sometimes, and that only when the Ground is indifferently good, that Earth only produces many successively the one after the other; as we see by small Corn, as Barly, Oates, &c. which are sown in those very Grounds that have just before produced Wheat and Rye; which, though not capable of producing some of the like so soon after it, have yet the Force of producing smaller.

The same things may be said of Grounds that have serv'd long for Vineyards, Woods, or Forests, or Orchards, &c. where when we destroy those kind of Plants, we must not expect that it will succeed immediately, if Employ'd in the same manner it was before, it being too much wasted or worn out for that purpose; but yet it may be good enough to serve a while for the Production of smaller Plants, and less Voracious; for Example, Pot-herbs,

Pease,

E

*Pease, Beans, &c.* and yet at last it will yield to the common Fate of all manner of *Earth*, which is to wear out quite.

It is in this that the *Gard'ner* must shew his skill; for he must have a perpetual Application to observe in what manner all the *Plants* of his *Garden* do grow, not to Employ his time in planting his *Ground* with Things that can no longer thrive there, and yet he must leave no part of his *Garden* unmanur'd, it will be sufficient to shift his *Legumes* and *Seed*: His *Earth* can never be so worn out or Exhausted, as to oblige him to leave it altogether unemploy'd; he may make it produce all manner of Things one after another, provided he never lets it want some Helps it requires. However, supposing he were oblig'd to plant or put Things of the same kind in the Room of the old Ones; for Instance, new *Trees* in the Room of others that are Dead, then in such a Case there is some work to be done, and some Oeconomy to be practis'd, which I will speak of hereafter; besides the manner of Employing *Earth* well, is fully examin'd in the Treatise of the *Kitchen-Gardens*.

## SECTION IX.

## Of Fallow Earth.

These Terms of *Fallows*, or *Earth* that lies at Rest and Unemploy'd, intimate, that the *Grounds* sometimes want Rest, thereby to be recover'd or reinforce'd, whether the Influences of the Stars, and more particularly the Rains, cause that useful Reparation (as certainly they contribute much to it) or rather whether those *Earths* have in themselves a fund of Natural Fruitfulness with a Faculty not indeed to render that Fruitfulness undrainable, but to re-establish it, and produce it again; when, after having been impair'd by continual Productions, we let it lie Fallow for some time, as if we did abandon it to its own Discretion, and judg'd it capable of knowing its own Dis temper, and to remedy it. Thus Philosophers impute to the Air an Elastic Force, and to use a more sensible Example. Thus Water has in it self a kind of Natural Coolness with a Principle of re-establishing, and reproducing that Coolness, when after its having been heated by Fire, or by the Sun, it is remov'd out of their Reach: Heat is certainly a stranger to it, and, as it were, an Enemy; so that it keeps this Water in a violent Motion; But when 'tis remov'd from that which caus'd and maintain'd that Heat, and thereby left at Rest, it destroys that which render'd it defective, and by degrees becomes cool again as before; that is, it recovers the perfection, which is natural to its Being and Temper.

Thus good *Earth* being impair'd by the Nourishing of some *Plants* that were Strangers to it, and drain'd it at once of all its ancient Salt, and even of all the new, as salt as it repair'd it; if we discharge or ease it of those *Plants*, and leave it for a while without requiring any thing from it, that is Fallow or at Rest, it will easily return to its natural Fertility, especially if instead of planting it with little ordinary *Plants*, we mix a little good Dung with it, inasmuch that the *Straw* that shall Rot, or be Burnt among it, will afford it new strength.

Nature shows us in this a true Circulation, which we will Explain hereafter in the Chapter of *Amendments*.

## SECTION X.

## Of Transported Earth.

There is but little to be said in the Case of *Transported Earth*, unless it be, that it is a Novelty our Age has introduc'd in Gard'ning. The Author of the *Georgics*, who has Treated with so much Exactness about the Differences of *Earth*, has not in the least mention'd this. This Expedient of Transporting *Earth* is seldom practis'd, but when a *Garden* is to be made in a Place that has none, which does not happen often, at least where great *Gardens* are to be made, or when we design to fill up some Trenches, which we have cause to believe worn out; in which cases *Earth* must be sent for from Places where it is very good. Wo to him who being necessitated to be at the Charge of such a Transportation, only chuses that which is bad; which is a Fault, I believe, few People do commit.

Good *Earth* seems to meet with a kind of Improvement in that Transportation, which is the Reason that People say, Such and such a *Garden* cannot be ill, since it is altogether compos'd of *Transported Earth*. The Reason of this Improvement by Transporting, is as difficult to be solv'd, as that of the *Amendments* which proceeds from the Burning of Stubble.

ble. The *Poet* gives Four without determining upon any, perhaps being willing to innuere, that he Judges them all equally good. Thus it appears Evident to me, that *Earth* really Improves by Transportation, whether that Improvement proceeds from that in the removal the Air penetrating more into it, receives some Principle of Vigour that was conceal'd, or that the Air Purifies some ill Qualities it had contracted; or, in fine, whether it renders it looser and more penetrable to the *Roots*, which roam as it were every where to look for some fresh Nourishment.

## SECTION XI.

## Of New Earth, or Ground new broke open.

There still remains to Explain what *New Earth* is, I mean *Earth* never having been the *Soil*. It is a Help or Succours newly Introduc'd in our *Gardens*, and apparently as much unknown in the Ancient Husbandry, as that of *Transported Earth*, which Authors do not in the least mention. We have a particular value for it, and indeed cannot have too much, since it is certain that this *New Soil* possesses not only all the first Salt, which was given it at the Moment of the Creation; but also the Major Part of the Salt of the Surface, which was press'd down to the Bottom by Rains and Waterings, the Weight of which made it defend where-ever it could penetrate. This *Salt* preserves it self in those hidden *Earths*, until they become a *Surface* themselves, and then the Air gives them a proper disposition to employ with Glory that Fertility wherewith they are Endu'd; and indeed they are no sooner at Liberty to Act, but they produce *Vegetables* of a surprising Beauty.

It is not difficult to apprehend what *New Mould* is, all *Earths* were so Originally, that is, at the Moment of their Creation, God by his Command having bestow'd upon them the Gift of the Faculty of *Production*, which till then had not been put in Use. From that time none of the *Earth* of the Surface of that Terrestrial Body or Mass, can be called *New*, since all those that were capable of Producing, have not ceas'd to Act hitherto: But whereas there are many Places, where the Bottom of that *Earth*, within Two or Three Foot of the Surface, has always remain'd without Action, and others where that very Surface has not been allowed to Act, both the one and the other afford us *New Earth*, to make use of in our Necessities: So that by *New Earth* we mean such as never serv'd towards the Nourishment of any *Plant*. For Instance, such as lies Three Foot beneath the Surface, and from thence as low as it can go, provided it be really *Earth*, or else we mean such as having already nourish'd several *Plants*, has afterwards been long without nourishing any others; for Example, such as has been built upon. We say, and that by Experience, that in the first Year, both the one and the other of these *Earths* are wonderfully good, especially for our *Gardens*, all manner of *Plants* and *Legumes* Improving, Growing and Thickning visibly in them: And when we plant *Trees* in them, provided they be good in themselves, and be well planted, few of them Miscarry; whereas in those that are naught, or really worn out, the greatest part of them Die, though never so well condition'd, or so carefully planted.

The Eyes are not capable to distinguish whether *Earth* be new or worn out, that Knowledge must proceed from other Things, the one and the other being extremely alike; and it might be said with Reason, that those *Earths* that are bad, whether they have always been so, or are grown so, are not unlike Gun-Powder, which being bad, or having taken Vent, cannot take Fire, and yet looks altogether like that which is good. Thus *Earth*, that is naturally naught and barren, or having been good is worn out, not having any thing within it to animate it, when it receives heat and moisture, remains as if it were dead, notwithstanding a Succours which would animate any other *Earth*; so that not contributing in the least to the Action of the old *Roots* of *Trees*, they at last rot, and together with them the whole Body of the *Tree*, as I have fully Explain'd in my Reflections upon the Beginning of *Vegetation*.

From whence it follows, first, That it is pleasant to make new Plantations, and that in good new *Earth*; and in the second Place, that all those who make new *Gardens*, ought certainly to be careful of preparing a kind of Magazine of it, in order to have it with Ease and Convenience, whenever they stand in need of replanting new *Trees*, which happens pretty often. The Space of the Alleys, or at least of part of them is very fit for those kind of Provisions to which use I Employ them, instead of doing what most People do; that is, to fill them with Gravel and Dirt, taken out of the Plats, or Squares and Trenches. He often does it happen, for want of such a convenience of new *Earth* to put again into the

the Trenches, as People would do if they had it, that a great deal of Money, Time and Pleasure is lost in being oblig'd to plant new *Trees* and *Plants* in the Room of the old ones that are dead ; for indeed few of them escape in those old, ill-condition'd *Soils*.

I must needs pity those who neglect a thing that is so Useful and so Necessary. Before I conclude what I had to say about *Earth*, I must speak a word or two as to the Colour of it, by which it is sometimes easie to judge of its good or ill Qualities.

## SECTION XII.

### Of the Colour of good Earth.

I have declar'd several Times already, That the most essential and surest Mark of the goodness of the *Ground*, is that which is taken from the Natural Beauty of its Productions ; some would willingly besides this, settle another certain mark upon the Colour of it, and say, that a blackish Grey is a convincing Proof in that matter, besides its being most pleasing to the Eye.

*Nigra fere &  
pessis pinguis  
sub nomine ter-  
ra. Georg. 2.*

This Question has not only been debated in our Days ; the great Authors of Antiquity have made some Reflections upon it before us ; for my part I am not in the least prejudic'd in this Point, having seen good and bad *Earth* of all Colours : But yet it is certain that this blackish Grey, which pleases most, and has deserv'd the Approbation of former Ages, is commonly in that respect one of the best Signs of goodness, though not Infallible. We often meet with Reddish and Whitish *Earth* that are Incomparable, but seldom any that is quite White deserv'g that Character. We likewise meet with some that is Black, either at the Top of some Hills, or in certain Vales, which are very barren ; it being a kind of dead Sand, which can at most only produce Broom and Furrs.

Therefore we must conclude, that the true mark to judge of the Goodness of *Mould*, is neither the Colour nor Depth of it ; since nothing but the fine Production it naturally affords can do it, they only can decide in that Point. For Instance, in the open Fields we may judge by the goodness of the Grass, which Cattle willingly feeds on ; by the *Brambles*, *Briers*, &c. In *Kitchen-Gardens* by the Size of *Artichokes*, large *Lettuces* and *Sorrel*, &c. But more especially, as has been said already by the Vigour of the *Trees*, their long *Shoots*, the large Size and flourishing Verdure of the *Leaves*, &c. These marks we may look upon as undeniable Proofs and Witnesses, upon whose Deposition we may absolutely rely, without trusting to any other. The Size of *Fruits* may be look'd upon as something in that Case, but is no Infallible Argument, since we commonly see large *Fruit* upon weak *Trees* and some very small upon others that are more Vigorous. I Explain the Reasons of so great a difference in another Place.

## CHAP. V.

### Of the Situation our Gardens require.

AFTER having sufficiently Explain'd what relates to the particular Case of *Earth*, I now proceed to the other Conditions that are necessary for the Perfection of *Fruit* and *Kitchen Gardens*, of which the second in my Opinion is the Situation.

There is a distinction to be made, viz. whether in relation to a *Kitchen-Garden* only without any mixture of *Fruit*, excepting such as are Red, as *Strawberries*, *Raspberries*, *Cherries*, *Currans*, which compose part of a *Kitchen-Garden*, or only to *Fruit-Gardens* without any *Legumes* ; it happens sometimes that the *Fruit-Garden* and *Kitchen-Garden* are made asunder ; or, in fine, this *Garden* being compos'd both of the one and the other.

In the first Case, which relates to a *Kitchen-Garden*, without doubt little *Valleys* or *Dales* are to be prefer'd to all other Situations, and commonly have all that is to be desir'd in a good *Ground* ; they are fit for Excellent *Meadows*, the *Moulds* is easie and apparently of a sufficient depth, it is fatten'd with all that is good upon the Neighbouring Hills. Fine *Legumes* grow in it with Ease and Plenty. Red *Fruit* acquire in it that Sweetness and Size which renders them recommendable : Waterings are easie at hand, Springs and Brooks being seldom wanting there ; but then they are liable to a great Inconvenience, by Inundations. When that Misfortune happens, few of those *Plants* escape which ought to last above a Year in the *Ground*. *Asparagus*, *Artichokes* and *Strawberries* meet with their Destruction

struction by being long overflow'd ; and thus all the Advantages that are promis'd by a good *Dale*, are infinitely overbalanc'd by the Desolation wherewith it is threaten'd.

In the Second Case, which relates to the having of good *Fruits* and betimes, certainly your elevated moderate *Dry Grounds* are the best, provided always the *Ground* be good in it self, and deep enough ; The Choice *Fruits* do not perhaps grow so large there, but that is sufficiently recompens'd by the Beauty of the Colour, the Goodness of the Taste, and the Forwardness of the Maturity. What Difference is there between the *Muscad-Grapes* that grow in those *Dry Situations*, and those that grow in moist *Valleys* : And indeed, *Muscad-Grapes* are the true Touchstone directing us to judge of the good or ill Situation of a *Garden* ; how delicious are your *Winter-Thorns*, *Burgamots*, *Lansacs*, *Petitons* and *Louifer-bonnet*, &c. growing upon an Elevated *Ground*, compar'd to the same kind of *Pears* growing in a *Meadow-Ground*. Those kind of *Fruits* are another convincing Proof of the Importance of the Situation of *Fruit-Gardens*.

But lastly, if in Relation to those kind of *Gardens*, that are coveted by most People, I mean *Gardens* compos'd both of *Fruits* and *Legumes*, the Choice is easily made. Nothing can certainly be better than a rising *Ground*, which furnishes all that is necessary both for the one and for the other, supposing still the *Ground* be good in it self, according to the Conditions heretofore Explain'd ; which being, the *Earth* is neither too dry nor too moist ; the Waters of the Hills washing it constantly, and not remaining upon it, afford it a proper temper ; the heat of the *Sun* performs its Function, without being oppos'd by Cold, which is inseparable from *Mosby Grounds*. Those *Risings* to be altogether according to our Desires must not be too steep ; least the *Torrents*, Summer commonly produces, might cause very considerable disorders there ; those are best where the ascent is almost Imperceptible, where every clap of Thunder does not threaten dismal Consequences, and where People are not expos'd to the Vexation of seeing their *Trees* torn up by the sudden gluts of Water, to see sometimes the *Earth* tumbled from the top to the bottom, and sometimes the Walks utterly spoil'd, and in fine, all the neatness, delight and advantage of it utterly overthrow'd. It were to be wish'd that all Gentlemen might meet with such favourable Situations for their *Gardens* ; but whereas they are scarce, and that People are often reduc'd to make them in the middle of great *Plains*, which is most common ; others upon *Hills*, and others in *Valleys* or *Dales* ; we will declare hereafter what may be most proper to be done in order to succeed in them, as well as is possible.

## CHAP. VI.

### Of the Exposures of Gardens, as well in general as in particular ; with the Explication of what may be good and ill in every one of them.

IT is not enough for a *Garden* to have a good *Ground*, and to be well situated, it must also be well expos'd ; and a small rising not being well expos'd, cannot be call'd an advantageous Situation. There are four sorts of Exposures, the *East*, the *West*, the *South*, and the *North*, all easily known by the Names that have been given them, with this difference, that among *Gard'ners* these Terms signifie the clean contrary of what they do among *Astrologers* and *Geographers* ; these only regarding those Parts, where the *Sun* actually appears, and not those which are lighten'd by his Beams ; for Instance, by *East* they mean that part where the *Sun* Rises, by *West* the part where it Sets, &c. Whereas the *Gard'ners* only consider those parts of their *Garden* upon which the *Sun* directly shines, and in what manner it shines upon it throughout the course of the day, either in relation to the whole *Garden*, or only in relation to some of the sides of it ; for Example, as to the sides, when the *Gard'ners* see the *Sun* at his Rising, and during all the first half of the day continue to shine upon one side, they call that side the *East*, and indeed it is really the *East* of the *Garden* ; so that when the *Sun* begins to appear later upon it, or to remove sooner from it, it can no longer be call'd *East* ; and by the same reason they call that side the *West*, upon which the *Sun* shines all the second half part of the day, that is from Noon till Night, and according to the same way of speaking, they call that part *South*, where the *Sun* shines from above nine in the Morning till Evening, or else that part where it shines longest in the whole day, whatever hour it begins at, or removes from it ; in fine, they call that *North* which is opposite to the *South*, and consequently that part which is least favour'd by the Rays of the *Sun* ; for perhaps it does not receive the benefit of it above one hour or two in

*Triste Lapis  
stabilit, matu-  
ris frugibus im-  
buit, adhibet  
venti, &c. Vir-  
gil buc. Ecl. 1.*

in the Morning, and the same at Night. This is the true meaning of Exposures in point of Gard'ning, and particularly in relation to the Walls of *Gardens*, whereby may be understood the meaning of that manner of speaking so common among Gard'ners; my *Fruits* of the *East* are better than those of the *West*; my *Wall Fruits* of the *East* are not so often water'd by *Rains* as those of the *West*, &c.

Besides, those Names of Exposures likewise express those Winds *Gardens* are more, or less expos'd to, and consequently can be more or less prejudicial to them; for the Winds in respect to *Gardens*, especially for *Trees*, are almost all to be fear'd; but yet some more, and others less, and that according to the different Seasons of the Year.

Although it may be urg'd, that whatever Situation a *Garden* be in, it has of necessity all the Aspects of the *Sun*, and consequently is in a Condition to enjoy the Favors of all the Exposures, as well as to fear the Insults of all the Winds, yet every body agrees, that some are better expos'd than others; which is particularly understood of such as are upon Hills, or the sides of Mountains, of which some have the *Rising Sun*, others the Setting; some lye *South*, and others *North*; for as to the *Gardens* that are situated in Plains, and are neither cover'd by Mountains, or high Woods, or lofty Buildings, the difference of those Exposures is not so sensible.

The usual manner of speaking to express the Exposures in respect of every *Garden*, in the whole, and without any particular distinction of sides, must be understood in relation to the Exposures of the whole coast where those *Gardens* are situated; as the manner of speaking of the Exposures of Walls in particular, relates to the manner of the *Sun* shining upon every one of them in the course of the whole day; and so for Example, when in speaking of a *Garden* situated upon a small Hill, we say that it lyes to the *East*, we mean that the *Sun* shines upon it as soon as it Rises, and shines but little upon it in the Afternoon: and when we say that a *Garden* lyes full *South*, it is when the *Sun* shines upon it all the day, or at least from Nine or Ten in the Morning till the Evening; and by the same reason when we say that such a *Garden* lyes to the *West*, we mean that the *Sun* does not begin to shine upon it till about Noon, and remains there till it sets.

Now the meaning of Exposures is fully understood, in order to decide which is the best of the four, either in general for the whole *Garden*, or in particular for every one of the sides; it will be fit to know in the first place, that those of the *South* and *East*, are by the Opinion of all Gard'ners the two chief, and therefore to be preferr'd before the two others; it is likewise fit to know that the Exposition of the *West* is not amiss, or at least much better than the *North*, which consequently is the worst of all.

Secondly, In order to decide between the two first, which is the best, the temper of the *Earth* must first be distinguish'd; for if it be strong, and consequently cold, the *South* is best; but if light, and consequently hot, that of the *East* will be most favourable.

The Exposures of the *South* in all *Earths* is commonly proper to secure all *Plants* against the rigors of the Winter, to give a taste to the *Legumes* and *Fruits*, and to forward all that is to be early in all Seasons; and therefore since it is favourable to all sorts of *Earth*, it must be so particularly to a strong cold *Earth*, which can hardly act unless animated by an extraordinary heat from the *Sun*, which is the most proper Exposition for it: but not for light *Earths*, especially in hot *Climats*, it being apt to scorch the *Plants* in Summer to that degree, that the *Kitchen Gardens* become of no use, it engenders a thousand Emors or kind of *Fleas* which gnaw and wrinkle the *Leaves*, it hinders the *Fruits* from growing to that bigness they should do, and thereby lessens the goodness of the *Taste*, and even often makes them drop before their time, which happens sometimes by reason that it spoils or dries up the *Branches* and *Leaves*, may even the stalks of those *Fruits*, as we often see it in *Muscats* and *Peaches*; and sometimes also in over-hard'ning the *Rine* of every *Fruit*, even to that degree that it often scorches and chaps them; by which means abundance of *Peaches* and *Figs* growing against Walls perish through excessive heats: therefore it is easie to decide the choice of those two Exposures, in respect to the difference of *Earth*; the *South* is most desirable in cold moist parts, but not so much in dry sandy Grounds.

Generally speaking, this Exposition of the *South* is free from the Northern Winds, which by their usual coldness are always cruel and fatal to all manner of *Gardens*, which is the reason it is generally chosen before that of the *East*; but yet it is most certain that in light Grounds, the last being favour'd by Night Dews, and the first gentle and mild Rays of the *Rising Sun*, is incomparable for Maturity, Size and Taste, as well as for the Preservation of *Trees* and *Legumes*, &c. and especially because over and above all this, it defends us from the North *West* Winds; that Wind rises between the *West* and *North*, and as it regularly blows in the Spring, it is commonly attended by white Frosts, which are very destructive to the Blossoms and *Fruits* of *Trees*, whereon it lights, which is the reason that People ca-

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sily bear with that Eastern Exposition even in strong *Earths*, but still I do certainly believe it best for light *Earth*.

Although I have preferr'd the Exposition of the *West* before that of the *North* without any hesitation, the last being certainly the worst of the two; yet in those *Climats* where the heat being excessive, burns, and absolutely ruins all that is too long expos'd to the *Sun*, the *North* ought to be chosen before the other; since our *Gardens* only want a moderate heat to nourish gently what they produce, especially to conduct *Fruits* to a perfect Maturity, and therefore in those *Climats* where the *Sun* seems too violent, I should rather affect a Northern Exposition, having but four or five hours of *Rising Sun*, and as much of the Setting as any other, whether that which scorches it all the Day, or that which shines upon it but half the Day: And certainly those kind of hot *Climats* are not in the least proper on the *South* Walls for any of our kernel, or stone *Fruits*, which are too tender for it, they are only proper for *Orange Trees*, *Citron Trees*, *Pomegranets*, *Figs*, and *Muscats Grapes*, &c. of which the greatest part of the *Leaves* must be kept upon the *Trees*; the other Exposures will be good enough, for those tender *Fruits* which cannot bear that of the *South*.

After having examin'd the Advantages that may be expected from good Exposures, let us now consider the Inconveniences that may be fear'd from them; but whereas they are not infallibly attended with them, we must indeed be prepar'd to bear them, but not discomforted when they happen, seeing the impossibility of a Remedy.

The Southern Exposition generally speaking is subject to great Winds from the middle of August to the middle of October, which often blow down the *Fruit*, some before their being ripe and full grown, and others after their being ripe, which are quite bruis'd by the fall; and thus the best part of the *Fruit* perishes, instead of performing its duty, which is to nourish and recompence the Master of the *Garden*; for which reason, in such *Gardens* directly expos'd to the Southern Winds, which otherwise enjoy the Advantages that are so much valu'd in Gard'ning, *Wall Trees* are most proper; *Dwarfs* also defend themselves pretty well, but *Standards* are to be pity'd, especially such whose *Fruit* does not stick fast to the Stalk, for instance, *Virgoules*, *Vertelouques*, the *St. Germain*, &c. which are not so proper for those Exposures, as those that have the power to resist better the violence of the Winds; for Example, the *Thorn Pears*, the *Ambress* and *Lischallerie*, the *dry Martins*, &c. or else stick to the Summer *Fruits* which are good at the time of their fall, as the *Lady Thighs*, the small *Muscats Pears*, the *Blanquets*, or whole *Pears*, the *Robins*, the *Russefers* or *Russetings*, &c.

The Eastern Exposure, though otherwise incomparable, has its Imperfections too sometimes; In the Spring it is subject to North East Winds, which are dry, cold Winds that wither the *Leaves* and new Shoots, especially of *Peach-Trees*; they likewise often blow down abundance of Kernel and stone *Fruit*, and particularly young *Figs*, at the time that by a reasonable size they began to give great hopes of plenty; those Winds are not the only Enemies to that Exposition, that which likewise is fatal to it, especially for the Eastern *Wall Trees*, is the not enjoying the benefit of *Rains*, which seldom coming but from the *West*, cannot reach the foot of the Walls, whereby the *Trees* are lyable to a mortal drought, unless it be remedy'd by the Expedients explain'd in the Treatise of the *Wall Trees*.

The Western Exposure not only dreads North West Winds in the Spring, which are so pernicious for *Trees* in Blossom, and in Autumn the Winds of that Season, those great throwers down of *Fruit*, but also, and that particularly in moist cold Grounds, the great *Rains*, which being commonly very frequent from the parts where the *Sun* Sets, often causes great Desolations there; whereas on the other hand, in dry light *Earths*, those kind of showers repair the defects of sterility, and amend the Disorders caus'd by too much drought.

As to the Northern Exposition in relation to *Wall Fruit Trees*, if on the one side it be tolerable for all Summer *Fruits*, and for some in Autumn, on the other side, it is very dangerous for the beauty and good taste of those of the Winter; but then again, it is the most advantageous that can be during the great heats for *Legumes* and *Red Fruits*, which we would make to hold out, as *Straw-berries*, *Rasberries*, *Currans*, &c. I have likewise explain'd this matter at large in the Treatise of *Kitchen-Gardens*, as well as in the use that is to be made of every particular Wall in a *Garden*.

Finally, The result of this small Treatise about the Exposition, is that all of them have their Perfections and Imperfections; we must endeavour to take our advantage of the first, and use all our Industry to defend our selves from the last.

## C H A P. VII.

Of the Third Condition, which requires in our Gardens the Convenience of Waterings.

*Aqua vitrix omnium virgultorum, & diversis singulis usus ministrat, &c. Ex D. Hieronimo.*

Nothing can be more certain, and more universally granted, than that it is impossible to have fine and good Gardens, especially *Kitchen Gardens*, without being able for a considerable part of the Year to secure them from their Mortal Enemy, which is drought; the Spring and Summer are subject to great heats and scorchings, and consequently the Legumes of the Season, that should be perfect and abounding can yield no pleasure, unless they be greatly moisten'd; they only improve and acquire the Perfections they ought to have, by the Virtue of Water, viz. largeness, thickness, sweetness, and delicacy; therefore I say that Legumes are in danger of being always small, bitter, hard and insipid, without the help and assistance of considerable long Rains, which commonly are very uncertain, or else that of great and frequent Waterings, which we ought to be Masters of, and to have at command.

Besides, whatever Rain may fall, which indeed may be favourable to small Plants, as *Strawberries, Greens, Pease, Beans, Salad, Onions, &c.* There are still other Plants in our Gardens, which require something more, for Example, *Artichokes* of a year or two's growth, which must be water'd regularly two or three times a week, a Pitcher at a time to every Foot; for if we think that a little Rain is sufficient to satisfy our *Artichokes*, we shall soon perceive that we are grossly deceiv'd, Gnats will annoy them, the head will remain small, hard and dry; and finally, the *Suckers* will only produce Leaves; the Experience of what is seen among substantial sale Gard'ners, sufficiently justifies the Necessity and Importance of Waterings; they seldom fail watering of their Gardens whatever Rains may fall during the Summer; and indeed their Ware is much finer than that of others who water less.

During seven or eight Months of the Year, there is generally a necessity of Watering all that grows in *Kitchen Gardens*, *Aparagus* only excepted, which only performing their Duty at the Entrance of the Spring are satisfied with the moistures of the Winter, and want none after the Months of April and May: But whereas those two Months are the times of Blasting and Drought, there is often a Necessity of Watering even the new Planted Trees; nay, sometimes it is good to Water those, which having brought forth a great Quantity of Green Fruit appear moderately Vigorous, and require some help in order to a good Reaping, which they are preparing for us; especially if the Earth be naturally dry and light, those Waterings must not be neglected at the Time of the Summer Solstice, and they must be renew'd in the Month of August, when the Fruits begin to form their Pulp, the Season being very dry; otherwise they remain small, stony and not palatable.

From whence it naturally follows, that Water is absolutely Necessary in Gardens, and that plentifully too, in order to perform the Necessary Waterings they require in due time; for indeed what can be made of any Ground without Water, it will remain altogether useless for Productions, and disagreeable to sight; therefore the best way is to pitch upon Situations that have the Convenience of Water; and whoever does not make that one of his first Considerations, deserves blame, or pity.

The most common, and at the same time the most wretch'd recourse for Waterings is that of Wells: It is true that they are necessary, when no better can be had, but at least they should be chosen shallow, for certainly it is to be fear'd, that the Waterings will be very Inconvenient, and consequently of little use, when the Water is difficult to be drawn up; the advantage of Pumps, though often deceitful, may be look'd upon as something in that Case; but the disburthening of some Springs or Conduits, a Neighbouring Canal, or a small Pond well stor'd, and well kept with Pipes and Tubs distributed into several Squares, are, as it were, the Soul of Vegetation; without it all is dead, or languishes in Gardens, though the Gard'ner be not faulty; but with it the whole Garden must needs be Vigorous, and abounding in every Season of the Year, which will redound to the Honour of him who has the Management of it, whereas it will utterly disgrace such as have nothing to plead for an Excuse.

## C H A P.

## C H A P. VIII.

Of the Fourth Condition, which requires the Garden to be partly upon a level, in all the Surface of it.

IT is very difficult, nay very rare to meet with Situations that are so equal in all their Extent, as not to have any Rise or Fall on any side; but yet it is not impossible: I do not think it very necessary to look for any to be as smooth as Water, but yet it is a happiness when such are met with; great Inequalities are certainly troublesome for Gardens. The Inundations or Overflowings which happen after long Rains, cause cruel Disorders in them, and cut out a World of Work to repair them; moderate Inequalities do no great harm, but rather good, especially in a dry Earth, when inclining to a Wall expos'd to the East, that part, as we have already said, being seldom soak'd by the Waters that fall from the Skies; they light most upon the Exposure of the West; and thus a fall guiding the Waters towards that East part, is very favourable.

Therefore, in my Opinion, as much as is possible, a situation that has but a little Inequality is to be prefer'd before another that has much; and if any be tolerable, 'tis only that I have been speaking of; inasmuch, that in Gardens that are too much inclinable to Drought, or lie somewhat high, and are of a perfect Level, it will be proper to allow them a little inequality: For Example, such a one as may be Imperceptible, and yet perpetual in all the Walks that lie Southerly, to the end that the Water which is of no Use in those Walks may fall into the Feet of the Trees of those two Expositions.

Such an Artificial Descent produces two good Effects, the first in that it is to be with'd that those parts may never want a little moisture, in order to Correct their Drought, whether proceeding from the Nature of the Earth and Situation, or from the Heat of the Sun by those Waters. The second is to hinder those Waters, by that means, from running into some other parts of the Garden, where they might prove prejudicial.

But when there is an indispensable Necessity of making Use of a Situation that is very unequal for a Garden. I explain hereafter in the Thirteenth Chapter what I think proper to be done, in order to Correct the Defects of it, as far as Industry can reach.

## C H A P. IX.

Of the Fifth Condition, which requires a pleasant Figure for a Garden, together with a well plac'd Entrance.

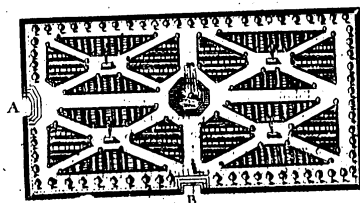
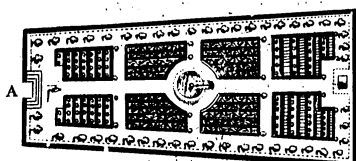
IT will not be difficult for me to prove, That the Figure of our Gardens ought to be agreeable; it is necessary the Eyes should meet at first wherewith to be satisfy'd, without any thing Fantastical to offend them: The finest Figure that can be desir'd for a Fruit or Kitchen-Garden, and even the most convenient for Culture, is without doubt that which forms a Beautiful Square, especially when it is so perfect, and so well proportion'd in all its Extent, that not only the Corners may form straight Angles; but especially, that the Length may be above once and a half or twice as long again as it is broad: For Instance, Twenty Fathom to Ten or Twelve, Forty to Eighteen or Twenty, or Fourscore to Forty, Fifty or Threescore, &c. For it is most certain, that those square Figures afford the Gard'ner, wherewith to form fine Squares with Ease, and to raise fine Beds; there is a great deal of Delight in seeing true Squares of *Strawberries, Artichokes, Aparagus, &c.* great Beds of *Cherrel, Parsly and Sorrel*, all very even, straight, exactly proportion'd out, &c. which cannot be done when the Figure is irregular, or at least, not without losing a great deal of Time, when in some Measure, to hide the Deformity of it, he endeavours to find or make something approaching to a Square.

Whence it is easy to conclude, how much I dislike in the Case of Kitchen-Gardens, all other Indented Figures, Diagonals, Rounds, Ovals, Triangles, &c. which are only proper for *Thickets and Pastures*, or *Flower Gardens*, in which Places they are at once both very useful, and of a great Beauty.

I do not question but all People will be Curious to afford their Gardens the Beautiful Figure now in Question, when at Liberty to pick and chuse. It is a great Vexation when

*Anima mea, sicut terra sine aqua. Plin. Reg.*

when an ill Neighbourhood reduces us to the Necessity of suffering imperfect Figures, Insets, and unequal sides, &c. Happy are those who meet with kind obliging Neighbours; Wo to them who meet with such as are cross and ill natur'd.



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Although the Figure of an Oblong Right Angled Square, be the most proper, yet I have made a fine Kitchen-Garden of one hundred and ten Toises or Fathoms in length, and sixty broad, somewhat resembling the Figure A of a *Lozenge*; and whereas I have dispos'd the chief Entrance in the middle of the narrowest side, it is not easie to distinguish the small Irregularity a Geometristian would find in it, and it is a very necessary Precaution to conceal as much as is possible, certain inconsiderable defects, which are met with in the space of a Garden, and to dispos of the Alley's, and the division of the Squares or Plats, as if the Ground was exactly of a Square Figure; for though neither the Angles or the four sides are perfectly equal, it does not hinder the Plats from appearing perfect in their Proportion.

Moreover, for the better Ornament of our Kitchen Garden, especially if it be large, it is proper that the Entrance should be plac'd just in the middle of that part which has most Extent, as it appears by the Figure at the Point A. in order to face an Alley, which consisting of the whole length of the Garden, may appear stately, and divide the Ground into two equal parts; each of those parts, composing Squares or Plats too long in proportion to their breadth, must afterwards be subdivided into other small parts, if necessary; the Entrance would not look so well in the middle of one of the broadest sides, as it appears by the Figure B. a long Prospect, moderately broad on both sides is much more pleasing, than to have a long one on the sides, and a short one before; however, it is sometimes impossible to dispose the Entrance otherwise, and in such a Case we must have Patience, and the same when we are necessitated to make it in one of the Corners, or thereabouts, though it be not so well; yet I have made very fine Gardens, which have their Entrance in one of the Corners, which I would not have done, had the disposition of the Ground permitted me to place it better; and yet no body finds fault with it, by reason that it faces a fine Alley, which is border'd all along by one of the great *Espaliers*, or Walls full of Fruit, which is very agreeable to the sight, when it is kept in good Order, such is the Entrance of the Kitchen-Garden of Rambouillet.

CHAP.

## CHAP. X.

*Of the sixth Condition which requires a Garden to be well inclos'd with Walls and Doors that shut well.*

THIS Inclosure, I desire, sufficiently testifies, that for Fruit and Kitchen Gardens I am not very desirous of those open Prospects which are so necessary for other Gardens; not but when the Situation will permit, I am very glad to enjoy the benefit of it. But that which I desire above all things, is that my Garden may be secur'd from Foreign as well as Domestick Thieves, and that the Eye may be so delighted in surveying all the things that should be in it, that there may be no room left to wish for any thing besides to divert it.

A Wall well garnish'd, *Dwarfs* well order'd, and very vigorous; all manner of fine good Fruits of every Season, fine Beds, and fine Plats, well furnish'd with all manner of necessary Legumes, clean Walks, of a proportionable largeness, fine Bordures, fill'd with useful things for the House: In fine, a well contriv'd diversity of all that is necessary in a Kitchen Garden; so that nothing may be wanting, either early or late, or for the abundance of the middle Seasons; these indeed are the things we ought to covet in our Gardens, and not a Steeple, or Wood in Perspective, a great Road, or the Neighbourhood of a River. In my Opinion, the Cloth as it were, should always be laid in a fine Garden, without mattering to see what passes in the open Fields.

A Kitchen Garden might have the finest Prospect in the World, and yet appear to me very ugly in it self, if wanting any thing of what it should have, instead of finding it there, I should be necessitated to go without it, or to have recourse to my Neighbours, or my Purse.

So that preferably to all manner of Prospects, I would have my Garden inclos'd with Walls, though I were to lose some fine point of Prospect by it, besides that the shelter they may afford against troublesome Winds, and Spring Frosts, are very considerable: It is almost impossible to be truly delighted with a Garden, as for instance, to have early Legumes and fine Fruits without the help of those Walls; besides, there are still many things, which dreading great heats, would hardly be able to grow in the hottest part of the Summer, unless a Wall expos'd to the North favour'd them with some shadow.

In effect, Walls are so necessary for Gardens, that even to multiply them, I make as many little Gardens as I can in the Neighbourhood of the great one, whereby I have not only more Wall-Fruit or *Espaliers*, and shelter, which is very considerable; but am also thereby enabled to correct some defects and Irregularities, which would render the Garden disagreeable; for in fine, I will at any rate have a principal Garden, that may please in its Figure and size, design'd for large Legumes, and some high Standards; a large Garden would without doubt be less pleasing, if for Instance, it were too long for its breadth, or too wide for its length, if it had a corner, or some visible wrinens to disfigure it, which being retrench'd, would make all the rest square; and thus such Gardens being lessen'd either on one, or on both ends, will afford ground to make little agreeable useful Gardens, as I have done in many great Houses, in the Neighbourhood of Paris.

Besides the Inclosure of the Walls, I am likewise for having good Locks to my Doors, that my Gard'ner may be able to answer for all that is in the Garden; I am sensible that there are some, who are very discreet and careful, but then I likewise know that there are others who desire nothing more than to have some Pretences.

## CHAP. XI.

*Of the last Condition, which requires that both the Fruit and Kitchen-Garden, should not be far distant from the House, and that the coming to it should be easie and convenient.*

I Am not ignorant that the Country affords large and moderate Houses, of which the first may be accompany'd with several Gardens, and the other satisfy'd with one only.

F 2

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As to those which may have several *Gardens*, it is proper that those that are design'd for *Flowers* and *Shrubs*, I mean the *Parterres*, should face the principal Aspect of the House, since nothing can be more agreeable than to see at all times on that side the charming variety of a Succession of *Flowers* whatever they be; they are so many different Scenes, or Decorations upon a Stage, of which the Figure never alters, they afford perpetual matter to delight the Eye, and charm us with their Sweets; but whereas generally those *Parterres* are as publick, and as open to every body as the very Court of the House, it is not fit to put any thing into them, the loss whereof might discompose us.

For these Reasons I allow that in such Houses, the *Fruit* and *Kitchen-Garden* should not be situated in the best Place, besides the last being subject to have many things, which though necessary, are not always pleasing to the Eye or Smell; as also producing many things, design'd for the Pleasure and Satisfaction of the Master, which might tempt some licentious indiscreet Persons, and so occasion cause of Displeasure and Complaint, I think it very necessary to place those *Gardens* out of the reach of the Publick.

Therefore as much as can be, we content our selves with placing them in the best Ground we can meet with, without prejudicing the place of the *Parterre*, pretty near to the House, being of a convenient easie Access; the Ancients were of this Sentiment, when they said, that the Steps of the Master, that is, his frequent Visits, were of wonderful use for the Neatness, Abundance, Goodness and Beauty of *Gardens*; so that *Gardens* that are at a distance, or of difficult Access, are liable to Disorders, Filth and Sterility, &c.

I hope that whereas in the beginning of this Work, I have presum'd to say, that none ought to pretend to have one of our *Gardens*, unless he were passably well skill'd in the *Culture* of it; none will undertake to make one, unless he may be able to afford himself the Pleasure of seeing it well *Cultivated*, and consequently he will desire to see it often, which cannot be done, the *Garden* being at a distance, or of a difficult Access.

As to the Houses, that can no wise afford above one *Garden*, I suppose it will hardly enter into any ones Thoughts to employ it wholly in *Box* or *Bowling-Greens*, instead of Employing it in *Fruits* and *Legumes*: In such a Case, whether in the Town or Country, the space of the *Garden* being reasonably large, it will be proper to take part of that which is nearest to make a small *Parterre*, leaving the rest for things that are of use and necessary; but if the Place be not large, my Advice is to make no *Parterre*; at least I would make none, being persuaded, that *Flowers* may be easily dispos'd with; resolving then to employ ones *Ground* in *Plants* that are for use; that part of the *Kitchen-Garden* which is most pleasing, ought to be put most within sight of the House, keeping such as might offend the Sight or Smell, most at distance: *Fine Espaliers, Dwarfes, Greens, Artichokes, Sallads* and the perpetual Action of the *Gard'ners*, &c. being sufficient to employ the Neighbourhood of some Windows, even for pretty considerable Houses, as well as for ordinary ones.

I am so sensible of the innocent Pleasure, the sight of a fine *Kitchen-Garden* can afford, that I am for making some fine Arbor in all large *Gardens*, not only to serve for shelter in case of a sudden Storm, which happens pretty often, but also for the Satisfaction of conveniently seeing the *Culture* of a *Ground* that is well employ'd.

Notwithstanding all I have said, I do not condemn those, who having but a very small *Garden*, affect *Flowers*, their Inclination leading them to it preferably to any other *Plants*.

Having said what is to be wish'd for, when People are at liberty to choose the Place of a *Garden*, let us now consider what is to be done when within the Dependency of a House, we find our selves reduc'd and necessitated to make use of any Place, whatever it may be, regular or irregular, good, indifferent or bad; and let us follow the same Order we have observ'd in the pretended choice I have explain'd.

## CHAP.

## CHAP. XII.

*Of what is to be done to correct a Defective Ground, either as to the Quality of the Earth, or the Lack of a sufficient Quantity.*

Whereas the most material Article for *Fruit* and *Kitchen-Gardens* is to have a good *Ground*, if notwithstanding the *Ground* where this *Garden* is to be situated should have some considerable Defect, which might be corrected, I think I should be blame-worthy to go on without explaining my felt upon what I think proper to be done in such a Case; in my Opinion, those kind of Defects may be reduc'd particularly to Five.

The First, is a very bad *Earth*.

The Second, an indifferent *Earth*.

The Third, a pretty good *Earth*, but not enough of it:

The Fourth, to have no *Earth* at all.

The Fifth and Last, That though never so good, the too great Moisture it may be subject to, may render it incapable of Improvement by the *Culture* of a Skillful *Gard'ner*.

As to the first Case, I cannot forbear pitying those who start so Ill, as to make a *Garden* in a place where the *Ground* is absolutely defective, especially if there were any possibility of placing it better. First, I pity them, by reason of the great charge they expose themselves to, which I dread of all things, especially in *Fruit* and *Kitchen-Gardens*, being persuaded that the property of those *Gardens* is to cost little, and to yield much. Second, I pity them for the small Success, that infallibly attends such an undertaking, especially when those Works that are necessary there, are only perform'd by halves: I wish none of the Curious may be expos'd to such Hardships; but yet supposing an unavoidable Necessity of falling into the first Case, to make a *Garden* in a very bad *Ground*, let us consider what remedy may be apply'd to it, and finally endeavour to make this *Garden* with as few Defects, and as small a Charge as can be possible.

First then, if the *Earth* be absolutely defective, either in stinking or being absolute Loam or Clay, or such as is dug out of Quarries, or else Stony, Gravelly and full of Pebbles; or, lastly, being only dry sand of any Colour, but still as unfruitful as the Sand of Rivers, and yet as high as to the Surface, as can be desir'd for a *Garden*. I will explain hereafter what I mean by that height.

I say, if this *Earth* happen to have any of these Defects, I know no better Expedient than to have it altogether taken away, in order to succeed, and that within the Depth of three Foot in such Places as are to be the chief Ornaments of the *Gardens*; viz. the *Trees* and long Rooted *Plants*, and two large Foot where the lesser *Plants* are to be, filling it up again with the same quantity of the best *Mould* that can conveniently be brought to it; which being done, one may rest satisfy'd for a long while, all will go well, without the trouble of any other Amendments; but in case so much good *Mould* as would be necessary to put every where, could not conveniently be had; at least it will be necessary to endeavour to get as much as may serve for the *Trees*, making a shift with indifferent good *Mould* for the rest of the *Garden*, that is, for *Kitchen-Plants*, it will not be difficult to amend it, as shall be declar'd hereafter.

I am sensible, that the Charge of great Transportations, frightens, especially in the case of large *Gardens*, but then 'tis but seldom that People engage themselves to the Necessity of it; those are works for Kings, the *Kitchen Garden* of Versailles is a terrible Instance of it: But as for small City *Gardens*, the occasions of doing it are often met with, and whereas the Expence of it is not too great, the Undertaking of it is very tolerable. This then is all that is to be done, when the Surface of the *Garden* is no higher than it ought to be, and has no other Defect than the ill Quality of the *Ground*.

In order to Explain my self as to this height, I suppose that the Matter in Hand only relates to the *Garden* that is immediately next the House, for which it is, and no wise for others, which Lying at a greater distance do not want so much precaution; now, in my Opinion, this first *Garden* ought to lie somewhat lower than the House, and thus the House being upon a higher *Ground*, it ought to have a Ballustrade with some Steps to come down into that *Garden*, which is an Ornament to be wish'd for in such Occasions, and without doubt such an ascent of Two or Three Foot above the Surface of the *Garden*, renders it much more pleasant to Sight, than it would be, if it lay level with the Step of the Door, and consequently much finer than those that lay higher than the level or floor, which require an ascent, and are thereby liable to great Inconveniences.

I return to the other Cases heretofore propos'd to say, That in case such a Place full of ill *Earth*, were too low, of about Five or Six Foot in Surface, it is visible that half the Expence would be sav'd, since there would only be a necessity of raising it higher, without taking any of it away; but however we must still reckon first on the small descent the *Garden* ought to be situated upon, in relation to the House; and, secondly upon the Three Foot of *Earth* that must be brought thither, particularly for the Trees and large Plants, and in order not to be mistaken, it will be proper to measure that *Earth* upon the place where it is to be taken with a rul'd Gage, by reason that this height of Three Foot, as it lies, being newly stir'd, will at first appear to make a greater Dimension, which afterwards being settled will reduce it self to the height propos'd, which I hold to be absolutely necessary, and unless care has been taken to measure the *Earth* before the moving of it, People must not flatter themselves that there will be enough, unless there be Four Foot or thereabouts in the first Months, which the Rains and Time will soon reduce to Three; otherwise, having had but Three Foot at first, they will soon find it dwindled to Two at most; that is too little by a Foot: And thus People will be expos'd to the Vexation of seeing all their Trees perish at the end of a few Years, and to be reduc'd to begin a new, if they continu'd in the mind of making their Trees succeed.

In the Neighbourhood of great Cities, great Conveniences may sometimes be met with to raise and fill up places in *Gardens* without much cost, 'tis only allowing the Liberty of throwing the Rubbish of the Foundations of Houses there; but often such Conveniences cost a great deal of Time, which in the Case of Planting is much to be fear'd, and even costs a great deal of Money to have it sifted, otherwise the *Garden* will be in danger of having more Stones and ill Sand than real *Earth*, and consequently the Owner of having an ill *Garden*; upon which every one may consult his Purse and Pleasure, and regulate himself accordingly.

The Answer I have made to the first Article, relating to a very ill *Earth*, where a *Garden* is design'd, may likewise serve for the Fourth, in which we suppose a place for a *Garden* without any *Earth* at all; Three Foot of good *Earth* must be brought to it, getting it as near hand as can be to save Money.

In the Second Case, in which the *Ground* having a sufficient depth, the *Earth* is notwithstanding but Indifferent; that is, either a little too dry and light, or a little too tough and moist, which are the two common Defects; or else, that there may be cause to judge it too much worn or exhausted: In such cases, immediate care must be taken to mend it, supposing one designs to have such Things in it as good *Earth* produces; the best of all Remedies is still to mix some new *Earth* with it, with this precaution, to mix loamy *Earth* with that as is light, and sandy *Mould* with that as is tough; and, in fine, to take such as is really good, to mix with that which is worn out or exhausted, unless you design to give it time to amend it self by Rest: And in case, as I have already said in the first Article, there be no sufficient convenience to get *Mould* enough for the whole *Garden*, it will be proper to begin with the place for the Trees which requires it most; and for the rest, recourse must be had to the common Amendments for *Kitchen-Plants*.

Thirdly, When the *Earth* is really good; but yet there is not enough of it to accomplish Three Foot depth, two Considerations are to be had; the first to examine whether the Surface be of a proper height or not: When it is of a proper height, all that is sought in the *Ground* must of necessity be removed, whether Sand, Gravel or Stones, putting as much good *Mould* in the Room of it, as will be necessary to have the depth requir'd, still preserving our Height.

Therefore the same Operation must be perform'd, in removing all that is bad under good *Earth*, when the Surface being, too high compar'd to the level of the House, there is a necessity of sinking it, in order to be one step higher than the level of the *Garden*; upon which all People may easily regulate themselves, to do it more or less according to the Exigencies of their *Ground* and its wants; but still, keeping to the quantity of good *Earth* propos'd, as well as to the distance that must be from the Surface of the *Garden* to the Door which serves for an Entrance into it.

The *Earth* being according to our Wishes, both as to quantity and goodness, and yet too low in the Surface; we must likewise examin how much too low it lies, in order to raise it conformably to our Wants and Wishes; it might chance to lay so low, that there would be a necessity to raise it considerably above three Foot, in which case all the good *Earth* must be dug up, and laid aside, and the bottom rais'd sufficiently with what ever could be got good or bad; after which the good *Earth* must be laid over it again with the management and mixture heretofore explain'd. I could wish I had better Expedients to propose to avoid the Charges of Transportation; but truly I know none.

There

There now remains to Examine what is to be done in the fifth Case, to correct the over great Moistures some *Gardens* are subject to; which rot every thing, and make the Production not only backward, but also intipid and bad; none but hot and dry *Earths* are forward; those that are moist are always cold, and consequently have no disposition for Novelities. This cold which is inseparable from Moisture, is of all defects the most difficult to be cur'd: The Ancients knew it as well as we do, and have given it the Name of Deceiver. But still since *Earth* has been submitted to the Industry of Man, and that there are but few things labour cannot overcome; let us declare what a long Experience has taught us in this Case.

Moistures are either natural and perpetual in *Earth*, or only accidental and passing; in the first case we have two Expedients:

The first is, to turn aside at a distance, if possible, by Conduits or Gutters, the Waters that annoy us, and give them a discharge to remove them from us, which being done, the *Ground* will not fail becoming dry; and when the first is impracticable,

The second is, To raise the whole *Platts*, or only the great *Beds* upon Ridges, and to that end make deep Furrows to serve for kind of *Faths*: The *Earth* that is taken from thence will serve to raise the *Platts* or *Beds*.

But if those Moistures are only Transitory, and, for Instance, only occasion'd by great Rains, and the nature of the *Ground* not proper to soak them in, recourse must be had to the same Expedient of raising of the *Earth* to drain them, and to the making of Conduits or Gutters to carry those Waters out of the *Garden*.

Finally, The Moisture not being extraordinary, the contrary of what we have prescrib'd for very dry *Grounds* must be done, that is, the *Earth* must be rais'd a little higher than the Walks, to the end that those Walks may serve as a drain to those elevated *Beds*, just as in the other Case the haughing of the Borders serves as a drain to receive and improve by the Waters of the adjacent Walks.

In order to raise *Grounds*, nothing can be better than what we have said to raise the Surface; and in case Conveniences be wanting for the Transportation of *Earth*, having abundance of great Dung at hand, it may be us'd instead of it, as I have said about the *Kitchen-Garden* of Versailles, mixing it abundantly at the bottom of the *Ground*, or underneath the *Earth*, in order to raise it as much as is necessary; but still great Conduits are of great use.

I conclude what relates to the Preparation of such *Grounds* as are defective, either in their quality, or too small quantity, carefully exhorting those who dig the *Ground* and along some Walls, to take care first not to approach too near the Foundations, and to leave always some solid Bank undug, lest the Wall might tumble down by its own weight, or by some unexpected showers. I exhort in the second place to fill up such Trenches immediately after their being empty'd, or rather at the very same time, one part after another; for want of which, and for the same Reasons, the danger of tumbling is yet greater.

After having examin'd what relates to the Conditions that are necessary for the Fruit and *Kitchen-Gardens* that are to be made, viz. The quality and quantity of good *Earth*, the happy Situation, and favourable Exposure, the convenience of Waterings, the level of the *Ground*, the Figure, Entrance and Closure of the *Garden*, together with the Proximity of the Place; having also propos'd the means to correct the defects of Drought and Moisture, there still remains to speak upon the Subject of the Activities and Declivities, when they are too steep for the *Gardens* we are absolutely compell'd to choose.

## CHAP. XIII.

*Concerning the Acclivities and Declivities of every Garden.*

**W**E have already said what is to be with'd for certain Inequalities, that may be favourable in *Gardens*, and Intimated what is to be fear'd from the Inconveniences of the great ones; let us now speak of what may be proper to remedy such as may be corrected; In order to which, as soon as the Place of the *Garden* is resolv'd on, upon the Considerations heretofore establish'd, the Figure being either very square, so that the Sides and Angles may be altogether, or at least partly Equal and Parallel, which is most to be with'd for; or else Irregular, the Angles or Sides being unequal, or having perhaps more or less than four Sides or Angles, both the one and the other differing in themselves, either in length or overture, &c. are Defects fit to be avoided, if possible, or at least endeavours must be us'd to rectifie them.

The Place of the *Garden* being, I say, resolv'd upon, either Voluntarily or out of Necessity, the Enclosure must not be begun, until after having taken the Level of all the *Ground*, to know all the Acclivities and Declivities, in order to take Measures accordingly; otherwise one might fall into many great Inconveniences, either as to the Walls that are to be made, or in respect to the Allies and Squares.

It is most certain, that every piece of *Ground* may chance to have different Rifings and Falls, viz. One, Two or Three for as many sides; and One for every Diagonal: And 'tis almost impossible to know the true Level of a *Garden*, without having first taken, and afterwards regulated all the Inequalities.

The Diagonals, to speak more Intelligibly in Favour of some *Gard'ners*, are, as it were, the two Arms of a *St. Andrew's Cross*, which may and ought to be figur'd by Trenches carried from Corner to Corner a cross some Place.

There is no necessity of saying, that the Level of those Inequalities are always taken from the highest part of the piece that is to be Level'd, to go to the lowest which is opposite to it, no Body being ignorant of it. Thus the Level of the Diagonals is taken, beginning from Corner, or Angle, to go to a lower opposite Corner: For Instance, the Diagonal A.B. begins at a Corner or Angles, which is form'd by the meeting of two sides, whereof the one is expos'd to the *East*, and the other to the *South*, to go to a lower opposite side, which is form'd by the meeting of the side expos'd to the *West*, and the side expos'd to the *North*; the other Diagonal shall be drawn from the one to the other of the two Corners, or Angles, C. D. which remain in the Figure we are examining, and is mark'd here. The

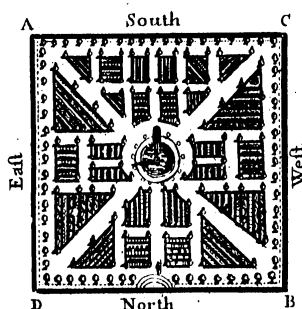
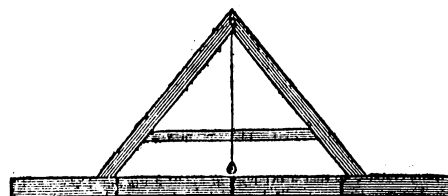


Fig 40

Level of the Exposure is taken all along every side, beginning, as we have said, from the highest part to come to the lowest.

In order to take every Level very true, it must be done upon a very straight Line, which shall be drawn either along the side that is to be level'd, which is the best; or upon another Line very Parallel to that side.

Every Level to be pretty true, though not so true as that of the Water of Fountains, in which even half a Line is very material; but, in fine, to be sufficient for the use now in question, every Level, I say, must be taken with the Rule and Leveller, which every body knows is a Triangular Instrument with a Lead, or other little Bowl hung to a small



Cord, and that fix'd to the obtuse Angle; this Leveller being fix'd upon the Rule, this small Cord must meet the notch that is made on purpose, both on the Top of that Angle, and upon the middle point of the side that serves for a Basis to that Instrument, in so much, that that Level is never true until that Cord with its Lead naturally falls into those Notches.

This is the manner of performing this Operation, which I might, perhaps, save my self the trouble of Explaining, it being already Explain'd in so many Books of Mathematics and Mechanics; but our *Gard'ner* perhaps having none of them, will be satisfy'd with what I shall tell him.

Besides the Leveller and the Rule, which must be very straight, and about Two or Three Fathom long, there must be three wooden Spikes to be driven into the *Ground* with a Mallet; and those three Spikes must be of a very even equal length, about Three or Four Foot, all split on the Top, in order to put white Paper in that slit.

I should not need to say (it being evident of it self) That there must be at least Three or Four Persons, that is, Three while the Rule and Leveller are us'd, and Four when it comes to the Spikes; one of these Persons must in all Cases stand on the lowest part of the side that is to be Level'd, holding a Perch to serve for a Mark, in order to raise or lower the said Perch, according to the Direction of him who is to regulate the Line and Leveller.

To find the Level: Having chosen a calm Day without Wind and Rain, and, if possible, a little lou'ring; or, at least, being so plac'd, that the great brightness of the Sun may not prejudice the Sight, one of these Spikes must be driven into the *Ground* even to the Surface, which must remain, and another in a straight Line a little below it; in order to place the Rule immediately and conveniently upon it, which being done, the Leveller must be put upon the Rule, raising or sinking the second Spike, until the Lead falls directly, and of it self, without any Motion of the Wind, or any thing else into the Notches.

This being perform'd, the second Spike must be absolutely fix'd, and the Leveller removed, after which, lying flat upon the *Ground*, one may aim or level with the Eye upon the Rule so fix'd and order'd towards the Person who holds the Perch below with a white or black Cloth on the Top of it, who perhaps may have had occasion to climb upon a Ladder, Wall or Tree, to raise or lower the said Perch according to the direction of the Leveller, and that until the Extremity of it, having been observ'd by the said Leveller, a Calculation may be made exactly how many Foot or Fathoms there are in a direct Perpendicular Line from that Extremity, which is the Top of the Perch or Spike, unto the natural Surface of the *Ground*, which lies immediately beneath the said Perch, &c.

And whereas the posture of lying down is too Inconvenient; the *Ground* may and ought to be dug near the first Spike that is driven into the *Ground*, low enough for any one to level with the Eye, standing, sitting or kneeling in it; or else use may be made of two of the Spikes heretofore mention'd, to which end they must be plac'd asunder upon two others that are fix'd into the *Ground*, or upon some other piece of Wood, or rising *Ground* made on purpose, where they must be kept very upright, after which the Rule must be plac'd upon the said sticks, examining with the Leveller, whether the Rule lies

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upon

upon a true level, in order to level or aim with the Eye, and when there is occasion for a third person, and consequently for a third stick, they must be plac'd with the same Exactness as the two first; the third being plac'd at any distance whatever, having a piece of Linen, or Paper, or a Hat upon the top of that spike, serves to aim more conveniently; so that having met at the End of the prospect, the extremity of the perch or stick that is held below, the borrow'd height of the sticks, as well as the height of the Rule, must be deduc'd upon the whole, and thus the Level will prove true. For Instance, in aiming, Twelve Foot may be found from the top of the Perch to the Surface of the Earth, out of which may be deduc'd first the four borrow'd Foot of the sticks, upon the Top of which the Leveller had laid his Rule, for which must also be deduc'd Three or Four Inches, which altogether amounts to Four Foot, and Four Inches; by which Supputation will be found seven Foot and Eight Inches declivity from that part of the Surface which is regulated, and to remain, from whence the Leveller aim'd, to the Surface of that part, where the last spike stuck, the level of which is look'd for.

These Inequalities are either Considerable, or not.

Those that are Inconsiderable are tolerable; for Instance, only half an Inch or an Inch and a half in a Fathom, which hardly wants, being corrected, if the Expence will amount to any thing considerable; so that a declivity of about a Foot or Two, or Two and a half to a length of Twenty Fathom, will do no great harm, and would hardly be perceptible, being only of half an Inch, or an Inch and half in a Fathom: Which ought to comfort one, especially if there be a great length, since a declivity of Twelve or Fifteen Foot upon Fourcore Fathom in length, though pernicious, is not so sensible nor inconvenient as one of Two Foot and a half upon Twenty Fathom, although the proportion be altogether equal.

If a descent of two, or two Inches and a half per Fathom is considerable, what would it be if there were three, four, five, or more, then it must of necessity be corrected, which may be done four ways.

First, in sinking that part of the Ground which lyes too high, as much as will be necessary to take away the roughness of the Alcent; and, in the second place, in carrying to the lower part what shall be taken from the higher, whereby a descent of five Foot will be reduc'd to three, taking a foot from the upper part, and placing it upon the lower; so that the upper will be a Foot lower than it was, and the lower a Foot higher, &c.

But whereas, above all things, care must be taken to preserve always three large Foot in depth of good Earth, before any thing be taken away from the upper part, holes must be made in different places of it, to examin how much good Earth we have there, in order to decide, whether we may really take any of it away, and how much; or whether we cannot take any part of it without prejudice to the Ground of the Garden; upon which it is easie to resolve; for the depth of good Earth being sufficient to bear a diminution, part of it must be taken away to moderate the declivity in question.

But if, on the contrary, none of it can be taken away without prejudice to the depth or quantity that is necessary there, recourse must be had to a third Expedient, which is, either not to meddle with the height at all, and to raise the lower part as well as we can for the best, in putting more good Earth over that which is good already, if it can be done conveniently, or else to take up that which is good, to put worse at the bottom, may even Stones or Gravel, if nothing better can be had; afterwards covering it all again with the good Earth that was taken up before; or if the Ground of the upper part may be sunk, all the good Earth must be taken up and laid aside, until so much of the bad, which lay under it, as shall be thought proper, shall have been remov'd; which being done, that which is good shall be laid again in the room of the bad.

But in case none of these three Expedients be practicable, we must make use of the fourth, which is pretty chargeable, but yet absolutely necessary; and he who meets with so untoward a Situation, must comfort himself as well as he can, if he designs to have a profitable pleasant Garden, since it is impossible to compass it by any other means.

This fourth Expedient is to divide this great descent into different degrees, or different Portions, to make several particular Terraces of it, some higher, and some lower, and all of them more or less broad, according as the declivity is more or less considerable; after which every one of those Terraces shall be dispos'd in themselves, according to the Method aforementioned, in order to correct moderate Inequalities; but that is not all, for every one of those Terraces must be supported and stay'd to hinder them from tumbling down, which must be done by little Walls, or small Banks well beaten and trampled, with some steps proper to defend from the one to the other, or else by some Banks that shall be foddred on purpose, to make them the more solid and lasting; and finally, as if they were

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so many separate Gardens, they must be accompany'd with Walks of a breadth proportion'd to their length, as we shall declare in the Sequel.

To end this matter, I am only to add, that the little Walls may serve for very good Wall-Fruit, the Exposure being good, or else for Raspberry-bushes, Gooseberry Shrubs, or Bourdelais, the Exposure standing Northward; the small Banks will not be useless neither, on the contrary, lying to the South or East, they may be useful for Spring Plants, as Winter Lettuce, Pease, Beans, Strawberries, Artichokes, &c. and after the Spring they may be us'd for Pincelane, Basil, &c. and if there be abundance of those Banks well expos'd, a considerable part of them may always be employ'd in good Grapes, and other Fruits, as I have done in the King's Kitchen-Garden, on certain Banks made on purpose.

When our Banks look to the North, they will be good all the Summer for Charvel, or else to low things that must be Transplanted, as Lettuce, Succory, Cabbage, Celery, &c. since there is no part of a Garden but may be useful for some things or other.

Those Banks require a necessary Precaution, which is not only to beat and trample them extream close at the bottom at the time they are made; but especially to keep the upper part of every Bank a little higher than the Neighbouring Alley to it, otherwise the Water running down from the Banks of the whole Terras, would soon ruin and demolish them; and, if notwithstanding this Precaution, any accident should befall it, it must of necessity be repair'd in the Winter, by adding some Earth to it, which must be well trampled and beaten anew, leaving only three or four Inches of good Earth loose on the Surface, which must be afterwards cultivated, in order to make that Place fit for Production.

And whereas I do not expect that the great Inequalities of Gardens should be absolutely level'd, I would have little Fences made from space to space in the Alleys or Walks, to turn the Water of great Showers into the adjacent Squares or Plats; which Fences must be made with boards stuck into the Ground across the Walks, about two or three Inches above the Surface of the Walks; and in case those Fences or Stays should not prove sufficient, I would have a drain made at the lower end of every Garden for the disburthening of those Waters; or at least, the Neighbourhood not allowing this discharge, I would have a great hole made (that is a kind of Well) in ones own Ground, fill'd with dry Bricks, for those Waters to lose themselves in, otherwise few Walls would be able to resist long against great Inundations without demolishing, and consequently, without causing great disorders.

## CHAP. XIV.

### Of the Disposition or Distribution of the whole Ground of every Fruit and Kitchen-Garden.

TWO particular Considerations are to be had in relation to every Fruit and Kitchen-Garden: The first is to order that Garden so, that it may be useful and abounding in its Production proportionably to its Extent, and the goodness of the Ground.

The second Consideration is to order it so, that it may be agreeable to the Eye, and convenient either for Walks, or Culture, and for Gathering, those being the two principal ends propos'd in the making of it, to which end it is not only sufficient to know what the Earth is capable of doing of it self without much help, but also what it is capable of performing without such and such helps it may receive.

To attain the first Point, which is the advantage of its Productions, the best parts of the Garden must be employ'd with all the Oeconomy and Prudence that can be, with Plants and Seeds, inasmuch that no part thereof may remain useless, putting into each such things as are most proper to succeed in them; and to attain the second, which is Beauty and Convenience, the Ground must not only be agreeably distributed into Squares or Plats, but the Walks must of necessity be made very neat, well plac'd, and of a suitable size, to the extent of the Ground, or Place, it being most certain, that no Intelligent Man will make a Garden without convenient Walks, which must be suited both as to size and number, to the largeness or scantiness thereof.

What we call the best parts of a Garden are really those which have the best Ground, in case, as it commonly happens, it be not equally good all over, as it were to be wish'd; but the goodness of the Earth being equal, the best parts or places of a Garden are those particularly that are most shelter'd from the Wind, and consequently receive most benefit by the Reflexion caus'd by the Walls.

By necessary well-plac'd Walks or Allys, we mean such as are commonly necessary either near the Walls, in order to see the *Trees*, the better, to cultivate them with more ease, and have the convenience of gathering the *Fruit*; or in the whole body of the *Garden*, to divide the Ground in equal Squares, and to multiply the pleasure of Variety in Walking, to see and visit what those Plats or Squares contain, as also that the Culture of them may be perform'd with more ease and convenience by the Gard'ner.

Therefore, as I have already said, in our distribution we ought to look at once for the advantage of Production, and the Convenience of Culture of Walking.

As for the advantage of Production we will certainly find it, if, in the first place, we plant good *Trees* against all the Walls, even sometimes, without excepting the Face of the House, especially, in a small *Garden*, planting *Dwarfs* also round about the Squares, instead of the Counter *Espaliers* or *Polehedges* that were formerly in use, but are now abolish'd, by reason that the keeping of them in good order was very troublesome, and their Productions very Inconsiderable.

Secondly, We will find those Advantages, if our Squares are garnish'd with useful *Bordures*, at a convenient distance from those *Dwarfs*, and finally, if the Body of every Square be continually fill'd with good *Legumes*, inasmuch, that those of one Season be no sooner gather'd or pick'd, than the *Earth* be again prepar'd to receive others for, or of, another Season.

The Third Part of this Treatise will shew what *Trees* will be proper to plant in all kind of *Gardens*, either for *Wall-Fruit* or *Dwarf-Standards*; the Fourth will shew the manner of *Cultivating* and *Pruning* of them; and the Sixth, which contains the Treatise of the *Kitchen-Garden*, will shew which are the *Bordures* I call useful, and which the *Legumes* of every Season, together with the *Culture* that is proper for them, in order to be fine, good and seasonable.

It is not sufficient to have set down in general, what relates to the Advantages of the Production, we must likewise declare what relates to the Conveniences of Culture, and the Pleasure of Walking; therefore we are now to regulate the space that is to be allow'd before the *Espaliers*, or flat *Bordures*, when any are made; to regulate the largeness of the Squares, and finally the place and breadth of the Walks of every *Garden*, whatever size it be of.

When I shall speak here of the Allies or Walks, I only mean the place destin'd for Walking, and nothing else, as some do, who in their Disposition give the name of Walks to all the Space that lies from the Wall to the *Dwarfs* of the Counter *Espalier* or *Polehedge*, or the Distance that lies from one *Dwarf* to another in the Division of the Squares or Ground Plats: This Space of Walks must never be narrower than five or six Foot, though the *Garden* be never so small, and ought seldom to exceed Eighteen or Twenty, though the *Kitchen-Garden* be never so large. This is what I had to say, as to the breadth, with this Proviso, That in the first place every Walk must be more or less broad in proportion to its length; and, in the second place, that it must always be kept very smooth and gravel'd, and as firm as can be under Foot, otherwise it would not be convenient for Walking.

It will not be improper to declare here wherein the Difference between a Walk and a Path consists: A Walk must be broad enough for two Persons to walk a-breast at least, and therefore cannot be allow'd less than five or six Foot; without which it would no longer be a real Walk, but a large Path; and, as to Paths, provided one person can go through them they are large enough, and therefore do not require above a Foot, or a Foot and a half at most in breadth.

CHAP

## CHAP. XV.

## Of the Disposition or Distribution of a very small Garden.

I Proceed now to the particulars of every *Garden*, and say, That commonly there are but few *Gardens* that have not at least five or six Fathom in breadth, with a proportionable length, since the name of *Garden* could hardly be bestow'd upon a narrower place; but however, whatever it be, it is certain, that such a place being well situated, that is, in the Face of the House, is a great Ornament to it, whether immediately joining to it, or divided by some small Yard. In case then of such a small *Garden*, in my Opinion, in order to manage the Ground to the best Advantage, the Entrance must be made in the midst of that breadth, with a Walk of about six Foot, which must be the only Walk, leaving only small Paths along the Walls and *Bordures*, about a Foot broad; and in case the Entrance should chance to be at one of the Corners, as sometimes one is necessitated to make it, we must likewise be satisfied with one Walk along the first Wall which presents it self at that Corner; this Walk may chance to have the Sun one part of the Day, and be shaded the rest, whereby it will be sometimes pleasant for walking.

If such a *Garden* being five or six Fathom broad, should happen to be as long again, it may very well be order'd, so as to contrive at every End, or, at least, at one of them a Walk of an equal breadth with the former, especially at that end which is nearest to the House, in which Case this walk may be allow'd a little more breadth than the other, which is an Observation the Practice whereof is very necessary in all kind of *Gardens*, especially great ones, to the end, that as it is customary to stop at the Entrance of a *Garden*; to consider it, a place may be found at first passably large, and consequently agreeable and airy: Those Walks at the ends will afford room for two or three different or separate Companies, which is a thing to be wish'd for.

Besides this, I would have the Walks that are along the *Espaliers* or Walls, at least at three or four Foot distance from the Walls, that the *Trees* may have at least three or four Foot of *Cultivated Earth*, whereas their former allowance was not near so considerable, by which means this Bank being pretty large, as I would have it for all *Espaliers*, even so as to make it yet much larger, in great *Gardens*, the *Trees* will not only be better nourish'd, but yet, besides the *Bordures* which support the *Earth*, and form an agreeable Figure in *Gardens*, some of those useful *Plants* that delight in the Neighbourhood of Walls, may be planted in them; I mean such as love to be shelter'd from cold dangerous Winds, which is a thing altogether necessary in order to have something in the Spring.

## CHAP. XVI.

Of the Breadth that is to be allow'd the *Bordures* of *Espaliers*.

I Desire every Body to reflect upon this Article, in which I advise them to place the Walks at a pretty distance from the *Espaliers*, or Walls, by reason of the Advantages that may accrue from the shelter of the Walls, which shelter is of no use when it only favours Walks, which receive no benefit by it; for, in fine, what Inconvenience can attend the *Cultivating* of three or four Foot more to the right or left of the Walk, in respect to the good use that is to be made of the Mould of every *Garden*, whereas the three or four Foot I cause to be added to the small Bank, to which *Espaliers* were commonly confin'd, will be much more profitable in that place, than if being employ'd to some part of the Walk, an equal quantity to it were *Cultivated* on the other side of that Walk, by reason that it could not enjoy the benefit of the shelter of the Wall.

I will not absolutely decide, whether *Dwarf Fruit-Trees* ought to be planted in very small *Gardens*, every Man is free in that to follow his own Inclination, though, in my Opinion, it were best to have none, unless they were small *Paradise Apple-Trees* or *Gosberry Shrubs*; I should fear those *Dwarfs* might grow so large as to offuscate or shadow the *Wall-Fruit* or *Espaliers*, which I have a particular respect for in this Place; besides, they would certainly be inconvenient for walking, and take away the Beauty and Pleasure of the Walk, not affording it room to breathe in.

Therefore

Therefore I would employ the smallness of my *Ground* in other Things than *Fruit-Trees*; for Instance, in *Strawberries*, *Salads* and *Pot-herbs*, &c. or else one part one way, and the rest of another, to have some little thing or other to pick at all times; and thus the whole space of our little *Garden*, of which we have divided the breadth by one only *Walk* in the middle, or made it narrower by a walk along one of the Walls or *Espaliers*, should be cut cross-wise by Beds about five or six Foot broad, with several small Paths.

After having maturely examin'd the distribution I have now made, I find it so reasonable that I would make no other, though it were for a *Garden* of seven or eight Fathom broad, nay, not even of those that consist of eight or nine.

## C H A P. XVII.

*Of the Distribution or Disposition of a Garden of a moderate bigness.*

**B**UT if it were for a *Garden* of ten to eleven, or eleven to twelve Fathom, which composes a *Garden* of a moderate size, whether it has been thought fit in regard to its Situation, to place the Entrance of it at the middle, or else at one of the sides; in both Cases I would allow the Walks seven Foot in breadth, nay, I would even allow eight or nine to that which is parallel to the Front of the House, leaving, as I have already said, a Bank of about five or six foot for every Wall; so that in such a Disposition I should only make Walks along all the Walls: and thus there would remain in the midst of the *Garden* a square about six or seven Fathom broad, or from seven to eight upon the whole length, and if that length should chance to be about fifteen or twenty, or more, it would be fit to divide it into two equal parts by a Walk partly like that of the *Espaliers* or Walls; but I would not allow it above three Foot, that Square not being above ten or twelve Fathom long.

Now the Master might follow his own Inclination as to the employing of that Square, either altogether in *Fruit-Trees* planted in equal distances, with *Strawberries*, and some small *Legumes* among them, only for the space of five or six years, while the *Pear-Trees* should be growing; or else to employ it part in *Fruit-Trees*, that is upon the edge of the Walks, always observing the distance I have heretofore mention'd, and the rest in *Salads*, *Greens*, *Artichokes* and *Strawberries*, which is what I should like best, or else I might employ the farthest part from the House wholly in *Fruit-Trees*, and the other in *Legumes*, every one of them having seven or eight Fathom in length to the breadth propos'd.

## C H A P. XVIII.

*Of the Distribution or Disposition of a Garden from fifteen to twenty Fathom in breadth, and one of five and twenty to thirty, and from thirty to forty.*

**I** Proceed now to a Place from fifteen to twenty Fathom breadth, upon any length whatever, which I look upon as a fine *Garden*; and, in the first Place, I will examine whether that *Garden* joins the House, or not; secondly, Whether the House be built with Free-stone, or only with a ragged Stone plaster'd over, or new pargetted.

The House not joining to the *Garden*, *Trees* must be planted against all the Walls, the *Garden* being altogether inclos'd; nay, even though it were adjoining, the Front being only plaster'd, or new pargetted; the same may be done, especially to have the benefit of the breadth and of the height of the space that lies between the Windows, as well as of the lower part of the Windows; but if the Architecture be fine and rich, I would leave it naked and expos'd to the Eye of every body, since it would be a pity to hide so fine an Ornament, through the hope of a little more *Fruit*.

In such a Place then, having fifteen or twenty Fathom in breadth, the length containing twenty five or thirty, I would have the Walks along the Walls eight or nine foot broad, nay, nine or ten, or more, the length amounting to five and thirty, or forty; and the Walk which offers it self at the Entrance, and is parallel to the Front of the House, What-

ever

ever length the *Garden* consist of, I would allow five or six foot more than the rest, nay, it might be allow'd twelve or more, it being a *Terrace*, as it happens sometimes, since the *Terraces* adjoining to a House can hardly ever be too broad.

Besides the Walks we have mention'd round about our *Garden*, there should be another in the middle to divide the breadth in two equal parts, and the breadth containing twenty Fathom, or a little more, it might be allow'd four or five foot more than those that are Parallel to the Walls to the right and left, especially this Walk fronting the entrance of the House.

As to the length of our *Garden*, which we suppose to be from thirty to forty Fathom, it must be divided in two by a cross Walk, almost about the same breadth with those of the sides, or only some feet less, considering the Extent is not so great, besides that generally it is closer by the *Trees* that edge it to the right and left, than those of its sides, which being favour'd by the Banks, have more Air than that of the middle.

Such a Walk cross-wise will form two Squares, which may have each about six or seven Fathom one way to nine, ten, or twelve on the other.

Whereupon I think it proper to say that a Square in any *Garden* whatever, always looks fine, when it consists of twelve or thirteen Fathom in length, and six, seven, or eight in breadth; and consequently much more when it is in some measure equal on all sides, and especially when it is a little longer than broad.

If it should happen at any time that going about to make a Walk on one of the sides of the *Garden*, one should meet with a Wall, which instead of being strait, should chance to be on a crooked Line in part of its extent, in such a case, in which we must not pretend to correct that defect absolutely, I am of Opinion still to make the Walk regular with strait Angles, that is, square, beginning it at four foot distance from that part of the Wall which advances most into the Walk, and making it square on the Extremitie where it is to end, it shall be garnish'd to the right and left with fine Bordesures that shall mark it; and as for those parts which shall chance to be much broader with Earth than they should be according to our usual Disposition, it may be employ'd usefully either in *Strawberries*, or other *Plants*, that are not capable to offuscate the *Wall-Trees*.

There are sometimes lengths of three or four score Fathom, and even more to eighteen or twenty in breadth, which we are speaking of, in which case that length must needs be divided into three or four equal Portions by cross Walks; and whereas such a length bears no Proportion to the breadth, I would stop the Prospect of our *Garden* within forty or fifty Fathom from the House by some Wall, or, at least, by some Pallisade; such a Wall might be proper to multiply the *Espaliers* or *Wall-Fruit*, or that Pallisade for *Grapes*, or other *Fruit-Trees*, and thus we should gain on all sides, either as to the Advantage of Production, or the Pleasure of the Eye.

Although the space of a *Garden* should contain five and twenty, thirty, or thirty five Fathom in breadth, I would make no other distribution of it, than what we have already made to a breadth of fifteen or twenty, unless it were to make the Walks somewhat broader, in proportion to their length.

## C H A P. XIX.

*Of the Disposition or Distribution of Gardens of an extraordinary size.*

**I**F the breadth of such a *Garden* should amount to three score, three score and ten, or four score Fathom, or more; I would divide it into four equal Portions, as I have done at *Versailles*, and in several other *Kitchen-Gardens*; or else I would make Counter-Walks garnish'd with *Dwarfs* upon the flat Bordesures, as I have done at *Rambouillet* for his Grace the Duke of *Montausier*, upon condition that in those two Cases the two Walks parallel to the Chief, which we suppose in the middle, about three Fathom broad, should not be allow'd above eight or nine foot: In my Opinion, it were a pity to make them broader, since that would employ too much Ground in Walks.

We have already mention'd the bigness the Squares of a *Kitchen-Garden* ought to consist of, and thus without repeating it, we will find that those two Walks will afford us fine ones, either as to their breadth or length; for the same Rule we prescribe for the dividing of the breadth, must serve for the division of the length, and we must needs be perswaded at all times that when a space of *Garden* approaches four score Fathom in

in breadth, and passes them in length, as the great Square of the King's Kitchen Garden does; it really composes a large Kitchen-Garden, since it contains at least seven or eight Acres of Ground, in which case the Squares may have fourteen or fifteen Fathom one way, to eighteen or twenty on the other.

I do not think there is any necessity of enlarging farther in what relates to the Disposition or Distribution of the Ground of Fruit and Kitchen-Gardens; what we have already said suffices, which is that when one may have or afford variety of such Fruit and Kitchen-Gardens, as Princes or great Lords do, who have occasion for them, it is proper to make little particular Gardens in Places adjacent to the great one, as I have done at Chantilly, at Seaux, at St. Ouen, &c. or round about the great one, as I have done at Versailles; or else the Overplus of the Place we would have Cultivated, must be employ'd in High Standard Trees; for to speak the Truth, over large Kitchen-Gardens are attended with great Inconveniences, and liable to great Charges, which very often do not answer our Expectations for want of due Cares.

## C H A P. XX.

## Of the manner of Cultivating Fruit-Gardens.

**A**Lthough this Culture taken in the whole, contains all what we have Explain'd in several particular Treatises, my Intention, notwithstanding, is to reduce it here to Three Things only: First, to the Tillage the Earth stands in need of; Secondly, to the Neateness Gardens require at all times. The remainder of the Culture of the Earth shall be examin'd in the Treatise of the Kitchen-Gardens.

Therefore we must conclude, that as the Earth, as often as it is hot and moist, always finds it self in an approaching disposition to Act, that is, of producing some Plants good or bad, and sometimes of no use for Man, because it can, as it were, never remain Idle, the Production it makes of one thing, must of necessity be prejudicial to another.

The Reason is, First, that the Interior Salt of it; that is, its Fertility, or Capacity of Acting is no wife Infinite, and is exhausted by often producing, as every Body knows: So that several Plants lying near one another, it always happens that all, or a great part of them grow the smaller, because that which was to serve for the Nourishment of all, being divided into many, the share of each must of necessity be the smaller, and the Nourishment of all of them the slenderer, or else it happens that some of them being more lively, either by being grown Naturally, or being of a Temper more suitable to that part of the Earth which nourishes them; this Plant has suck'd a greater quantity of the Nourishment that was in that Place ready prepar'd for Vegetation, than any of the rest.

It is not only the Inside of that Earth which appears exhausted to us in its Productions, when too great a quantity of different Plants have exhausted it by their Roots; we say, besides, that this Earth is dry and wants Moisture, when it is hindered from receiving the Benefit of the Night-Dews, and of those small Show'rs which have the Gift of repairing and amending that Earth, provided they may be able to penetrate to the Internal Parts; thus when the Leaves of all those Plants, which cover the Ground, come to receive those kind of Moistures, they hinder them from descending lower, and so they remain expos'd to the Sun, which rarifying them as soon as it lightens and heats them, converts them into Vapours, and so consequently for that time prevents their being of any use to that Earth.

It follows from thence, that when we would have our Trees, and particularly our Dwarf and Tall Standards well fed, and consequently very Vigorous, and thereby agreeable to light, we must take care.

First, That they be not too near one another, to the end that the Nourishment may be the less divided.

Secondly, That there may be no sort of Plants near them, which may inwardly steal their Nourishment, or outwardly hinder the Refreshings and Helps they are certainly to receive by Rain and Dew.

Thirdly, Care must be taken to keep the Earth always light, and consequently often Cultivated, as well that the Moistures of Rains and Dews may easily, and the sooner, penetrate to the Roots, as that the Earth may be duly heated by the Rays of the Sun, which it stands indispensibly in need of.

Now

Now to put that Earth in a Condition of producing advantageously what we require of it, without allowing it time to employ it self in other Things, as also to preserve cleanness in the whole extent, we must be careful to Till the Ground, to amend and cleanse it when it requires it. Let us now examine those four kind of Cultures, to shew the Manner, Use, Cause and Success of them.

## C H A P. XXI.

## Of Tillage.

**T**illage, properly speaking, is nothing but a Movement or Stirrings, which being perform'd on the Surface of the Ground penetrates unto a certain Depth, and makes the lower and upper parts reciprocally change place: Now it not being my Intention, to speak in this Place of the Tillage that is perform'd with a Plough in the open Fields, but only of the Tillage of our Gardens, it is proper to know that it is perform'd several different ways.

First, With the Spade and Haugh in calc'd Grounds.

In the Second Place, with a Pitch-Fork, and French Mattock in stony and yet pretty strong Ground; some are perform'd deeper; for Instance, in the open Ground, and in the middle of the Squares or Plats; and others lighter, viz. about the Foot of Trees, upon Asparagus, among small Legumes, &c.

It must be noted next, that in all likelihood the Cause or Motive of Tillage, is not only to make the Earths appear more agreeable to sight, though they really thereby become so, but that it is, in the first place, to render such easie as are not so, or to preserve those in a good Case that are so naturally; and, in the second place, that it is chiefly thereby to augment Fertility in such Earths as have but little, or to preserve it in such as have a sufficient Store: Earths that are absolutely barren, must not be Till'd.

When I talk of rendring Earth easie, I mean to make it become sandy and loose, inasmuch, that the Moisture and Heat which comes from without, may easily penetrate through it, and that it may be no wife compact or sticking together, like clayish, gravely Earth, which by the Constitution of their Nature, are no wife proper for Vegetation.

And when I speak of endeavouring to give Fruitfulness, I mean, that the Tillage must contribute to give a temper of Heat and Moisture to a Soil, that is already provided with that Salt, it stands in need of for the chief part of Fertility; this temper of Heat and Moisture being so necessary to the Earth, that without it its Salt is altogether useless, inasmuch, that it can produce no manner of Plants, in the same manner as Animals can enjoy no perfect Health, without the temper of Elemental Qualifications.

It is not enough to have given Reasons for the Cause of Tillage, we must besides give Rules, that may serve to procure this Temper in question to Earth.

Upon which, I say, that it is observable, that some Earths are easily heated; for Example, such as are light, to which we have but little to do in Relation to heat; but where-as they are commonly dry and parch'd, we must work carefully to procure them Moisture: Others are not easily heated; for Instance, those that are Strong and Cold; and those require but little Culture for an augmentation of Moisture; on the contrary, they have generally too much of it; but they require a great deal of help for an additional Heat.

Moreover, some kind of Plants require more Moisture; for Example, Artichokes, Salads, Sorrel and thick Rooted Plants: The Earth which produces them must be dispos'd in such a manner, as to receive a great deal of Water from without: Others are satisfy'd with less, as Fruit-Trees, and Asparagus, &c. and we need not much trouble our selves to afford it them; but however, as we have nothing in our Gardens which requires either an excessive Heat or Moisture, so we have nothing but what requires some. The Sun, Rains and Subterranean Waters provide for one part, and we ought to provide, by other means, for what may be wanting besides; which is, what we do by a well understood Culture, of which Tillage is one of the chief Parts.

Those Tillages are to be perform'd at different Times, and even differently as to the multiplicity, in respect to the difference of Earth and Seasons: Earth that is hot and dry must be Till'd in the Summer Time, either a little before, or while it Rains, or soon after it, especially when there is any likelihood of more; at which time they can neither be Till'd too often, nor too deep when it Rains; as, by the Reason of Contraries, they must but seldom be Till'd in very hot Weather, unless they be water'd immediately after it. Those

H

frequent

Exiguu tantum  
gelidius res no-  
lle reparat.  
Georg. 2.

Et tui putre fa-  
lum (namque  
hoc imitatur a-  
rambo) Georg. 2.

Optima patri  
arvis solo; id  
venit curant, ge-  
lidique pruine,  
& labe facta mo-  
vent, robustius  
jugera soles.  
Georg. 2.

Prima Ceres  
sewa mortales  
vertere terram  
instituit, cum  
jam glandes, at-  
que arbuta sacra  
deficerent silve,  
& vultus in du-  
luna negret.  
Georg. 1.

Cultraque fre-  
quenti in qual-  
cumque vides  
arces, laud car-  
da sequuntur.  
Georg. 2.

Omne quot an-  
nis terque qua-  
terque solium sen-  
densium, glaba-  
que scissis, &c.  
ternum frangit  
da bidentibus.  
Georg. 2.

Et caca relaxat  
spirant entia, mo-  
rue veniat qua,  
focens in herbas  
Georg. 1.

frequent breakings of the *Ground* make way for the Waters of Rain, and make them penetrate towards the *Roots*, which stand in need thereof; whereas otherwise they would remain upon the Surface, where they would be of no Use, and soon after evaporate: *Tillage* likewise makes a passage for heat, without which Moisture can be of no Use.

On the contrary, Cold, Strong, Moist *Earths*, must never be *Till'd* in time of Rain, but rather during the greatest Heats, at which time they can neither be *Till'd* too often nor too deep, especially to hinder them from parching and splitting on the Top, which, as we have often said, does a great deal of prejudice to the *Roots*; and to the End, that it being softned by *Tillage*, the heat may penetrate the easier to them, and thereby may destroy the Cold, which hinders the Action of the *Roots*, and makes *Trees* yellow.

The Nature of the *Earth* shews us in this, as well as in many other Things, that it will be order'd regularly, so that it answers our Intentions with success, when it is prudently manag'd; whereas, on the contrary, it opposes them when it is govern'd ill: The Season of putting most *Coin* into the *Ground*, which commonly are only sown each in one Season, the time of *Grafting*, of *Pruning* and of *Planting Vines* as well as *Trees*, &c. which likewise is only done in certain Months; all these, I say, are so many Instructions which Nature gives us, in order to teach us how to study well what the *Ground* requires, and precisely at what time. By those Observations, a great Application has taught me, that it is good to *Till* often about *Trees*, either in dry, light *Earths*, or in such as are strong and moist; the one in rainy Weather, and the other in great Heats.

Those frequent *Tillings*, which I advise, when Convenience will permit it, are of great Use; for, besides their hindring part of the Goodness of the *Earth* from being exhausted by the Production and Nourishment of ill *Plants*; they, on the contrary, make those *Weeds* which Rot, being laid under *Ground*, serve for an Amendment to fatten it; but moreover those frequent *Tillings* partly destroy the Ancient Maxims, which had Establish'd but one *Tillage* for every Season; and what I like most in them is, that, at least, they establish the Necessity, and consequently the Usefulness of them: But I add, that they are not sufficient, unless, during their Intervals, care be taken to scrape, or pull out those ill *Weeds*, which especially in the *Summer* and in *Autumn*, grow upon *Earths*, and then Multiply, *ad Infinitum*, when they are suffer'd to run up to Seed.

We must say here by the by, that the times in which *Trees* blossom, and the *Vine* shoots are very dangerous for *Tillage*, it must never be performed at those Times, neither about those *Trees* or *Vines*; the *Earth* being newly stir'd in the Spring, exhales abundance of Vapours, which upon the least white hoary Frosts, which are common at that Season, being stop'd near the Surface of the *Earth*, stick upon the Blossoms, soften and moisten them, in so much that rendering them susceptible to the Frost, they contribute to kill them; *Earths* that are not *Till'd* at that time, and consequently are hard about the Surface, are not subject to exhale so many Vapors, and therefore not subject to so many Accidents of Frost.

From what I have said heretofore to favour the Nourishment of our *Trees*, it follows, that I condemn those who Sow or Plant, either many *Pos-herbs*, or *Strawberries*, or *Flowers*, near the Foot of their *Trees*, such *Plants* being certainly very prejudicial to them.

The Rule I Practise for the Culture or *Tillage*, that is to be perform'd about our *Trees*, as well in the Winter as in the Spring, in dry light *Earths*, is to allow them a large one at the Entrance of the Winter, and the like as soon as it is past, to the end that the Rains and Snows of the Winter, and the Rains of the Spring, may easily penetrate into our *Earth*; and as for the strong and moist *Earths*, I give them a small *Tillage* in the Month of *October*, only to remove the *Weeds*, and tarry to give them a large one at the end of *April*, or the beginning of *May*, when the *Fruit* is absolutely knit, and the great Moistures over; thus the Surface of that *Earth* being kept hard, firm and close, has left but little passage for the Waters of the Winter and Spring, which we have no occasion here, for the Snow being melted, without having been capable of penetrating, remains part upon the Surface, where it is converted into Vapors, and the rest following the Declivities of the Place, descends into the Neighbouring Rivers.

I must needs say, in this Place, that nothing moistens so much, and penetrates so far as the Water of melted Snow. I have seldom known Water to penetrate above a foot deep, whereas the Water of Snow will penetrate two or three Foot, as well because it is heavier than common Rain Water, as by reason, that as it melts slowly and by degrees, and from the undermost part of the Mass of Snow, it soaks in with more ease, without being hindered by the Wind, or by the heat of the Sun.

Therefore, as much as I dread abundance of Snow upon strong, moist Grounds, and cause it to be remov'd from about our *Fruit-Trees*; I like it, and cause it to be gather'd in dry *Earths*, there to make a kind of Magazine of Moisture; and especially in those

*Earths*

*Earths* I cause that which lyes, and is of no Use, in the Walks, to be taken up and thrown into the *Bardures* of the *Hespalters* or *Wall-Trees*, and particularly to the Exposures of the *South*, which in the Summer-time want most moisture; and the same into the Exposures of the *East*, even in strong *Earths*, by reason that the Summer Showers seldom falling upon them, the ground of those Exposures remains commonly dryer than the rest, and consequently the *Trees* are thereby expos'd to suffer.

This Necessity of *Tillage*, which I recommend and advise, is sometimes contradicted by the success of certain *Trees*, which being cover'd with Pavement or beaten Gravel about the Foot, do notwithstanding thrive well, though they are never *Till'd*; to which I have two things to say in answer; the First, That as commonly such *Trees* are plac'd under Spouts or Gutters, a great deal of Water falls upon them, which penetrating through the Crany's of the Pavement, or through the beaten Gravel, furnishes a sufficient Nourishment for the *Roots*. The Second is, That the moisture which has thus penetrated into those Grounds cover'd with Pavement, preserves it self much better in it, and longer than in others, the wind and the heat of the Sun not being capable to destroy it: yet notwithstanding, I still recommend *Tillage*, as well for the good of the *Earth* and *Plants*, as for the Pleasure of the Eye; the Universal Experience we have of it, can never be destroy'd by so small an Objection, no more than the Use of Bread and Cloathing can be condemn'd, although the Savages do not understand it: *Fig-Trees* *Orange-Trees*, and other *Plants* and *Shrubs* in *Cases* sufficiently justify the Use of *Tillage*, or breaking of the Ground to give a Passage to the Water or Waterings, without which they Pine, and often Perish.

Rapide potius  
illis arbor,  
aut lites penetrabile frigus  
durat. Georg. 1.

## CHAP. XXII.

### Of Amendments or Improvements.

AFTER having explain'd the Motive, Use and Manner of *Tillage*, we must do the same thing about Amendments, which are nothing but a bettering, or recovering of *Earth*; we have already said, that this Improvement might be done with all manner of *Dung*, of which we must now explain the Motive, Use and Manner.

As to the Motive, it is likewise certain, that when we amend, or Dung the Ground, it is with an Intention of affording Fruitfulness to that which wants it, that is, that which has many defects, and consequently little Disposition towards Production; or else to preserve it when it has it, and might lose it, unless it received from time to time some necessary Reparations, according to the Productions we require of it, either beyond its Capacity, or conformably to its Power; and likewise to amend it more or less, according to its Temper, whether good or bad: For Example, There must be a great deal of *Dung* to produce *Pos-herbs*, which grow in a short time abundantly, and succeed each other quickly in a small compass of Ground, which without that might grow barren; on the other hand, *Trees* require but little or none for their Nourishment, by reason that being long a-growing, they make but inconsiderable Productions, compar'd to the Ground they take up; and *Lusts*, Though they remain long in one and the same Place, yet by means of their *Roots* which stretch out to the right and left, they make a shift to pick up the Nourishment that is proper for them, far and near: I add, that the *Earth* which has a great deal of Fruitfulness in it self, requires less than that which has but little; and Finally, Cold moist *Earth* requires more than those that are hot and dry.

Certainly, and no body can be ignorant of it, the great defects of *Earth* consists, as I have already said, either in too much moisture, which is commonly accompany'd with cold, and great ponderousness, or else in too much drought, which is likewise regularly accompany'd with an excessive lightness, and a great Disposition to parching; We likewise find that among the *Dungs* we may employ, some are too fat and cooling, for instance, the *Dung* of Oxen and Cows; and the other too hot and light, for Example, the *Dung* of Sheep, Horses and Pidgeons, &c. and whereas the Rensedy must have Vertues opposite or contrary to the Distempers it is to cure; we must employ hot and dry *Dungs* in moist, cold, heavy *Earth*, in order to heat them, and make them lighter and calier; and Oxen and Cow *Dung* in lean, dry, light *Earths*, to make them fatter, and more material, thereby hindring the great parchings or droughts of the Spring, and the great heats of the Summer from drying them up with too much ease.

There are at this time great Controversies in Philosophy and Chymistry, to endeavour to decide which are the best *Dungs*, and that with the same exactness or accuracy Mathematicians use in deciding what is necessary to form a straight Line, &c. The World is certainly highly oblig'd to those Gentlemen, who drive their Curiosity and their Observations so far into the Secrets of Nature; I hope, we may reap great benefits by it, but in the mean time, I am of Opinion for my self, and for those for whom I write, that we can do no better than to proceed in this as I do, orderly, plainly and grossly, being persuaded that the fertility of Earth does not consist, as, I may say, in an indivisible Point; and indeed I am so far from being willing to occasion the least scruple in any body, and especially any wife to scare or terrify our Gard'ners in point of Culture, that on the contrary I endeavour as much as in me lyes to make it plain and easie to them.

To which end, I think I may say once more, that we may form to our selves a certain Idea of richness in Earth, which certainly contains in its Bowels a Salt which occasions Fertility, and that this Salt is the only and real Treasure of this Earth. Thus we say, That the Money of a Miser (which makes his Riches and Plenty) is the Treasure he possesses; yet this Miser will still remain equally Rich and Pecuniary: If, in the first place, he spends nothing, or, if in the second place, whatever Liberality he may affect, it happens for that he constantly receives as much Gold and Silver in one hand, as he spends with the other; he spent yesterday fifty Shillings, to day he has increas'd his Store, either in Gold, Silver, or Goods, to the value of the same Summ; he is then equally Rich, so that to morrow he shall be able to spend the same Summ, and to take up the next day, either the same Money in Bond, which is not common, or the value, &c. and thus, *ad Infinitum*, this Circulation is real and effective.

We must know for certain, that Earth has been created with a Disposition to produce Plants, and that (excepting some Stones and Metals which are extraordinary Productions of Nature) there is nothing on the Earth which is not come out of its own Bosom, and that by the way of Vegetation, and consequently all the Vegetative Plants we see are part of that Earth, and thus we may affirm that there is nothing (whatever it may be, provided it be material) but what may serve to amend that Earth or Soil returning to it by way of Corruption, under whatever Figure it returns to it; because that whatever re-enters into that Earth, gives it back in some manner what it had lost, either in the same Specie, or in Value, and in effect it becomes Earth again, as it was before; thus all manner of Stuffs, Linnen, the Flesh, Skin, Bones and Nails of Animals, Dirt, Urines, Excrements, the Wood of Trees, their Fruits, their Leaves, Athes, Straw, all manner of Corn or Grains, &c. In short, all in general that is palpable and sensible on Earth (excepting perhaps as I have already said, most Stones, and all Minerals) all this entering into the Ground, serves to amend and better it, so that having the Convenience and Facility of spreading often upon Earths, as we have it in good Farms, and particularly in the Neighbourhood of Cities, as it is practis'd for the sowing of Corn, and for Legumes, we put our Land in a Condition of being able to continue to produce always without Intermittion.

Moreover, our Ground, though good, not being permitted to produce, for Instance, such as are built upon; those Grounds thus cover'd with Buildings, are, though against their Will, like a Rich Man who spends nothing, though able to spend much; they always remain, as the Philosophers say, equally Fertile in Power, that is, equally capable of producing, and would actually produce, if they were not hindered from so doing; as to the others which produce at all times, if in Tilling of them, the Plants they had produc'd be again put underneath them, as it happens often, especially in those parts that are the Seat of War; those Plants thus put under the Surface of that Earth rot there, and serve to fatten it again to the same degree it possess'd before the producing of them, or else we may say, that it is the same Salt in Specie, which returns to it, and makes it as Rich, that is, as Fertile as it was before.

And when all the Productions of such a spot of Ground are taken away, as it is very usual, and that in lieu thereof it be allow'd as many of the Productions of another place, and that by means of rotten Straw, season'd, as it were, with the Excrements of some Animals, which Excrements are likewise originally sprung from the Earth, and make a part of it, that Earth having thereby repaired its loss, becomes as Rich, that is, as Fertile as before.

We may then in some manner look upon Dungs in relation to Earth, as a kind of Coin which repairs the Treasures of that Earth.

Now as there are several kind of Coins, some more precious, others less, but still, both the one and the other being Coin'd, pass in Trade and Inrich; so there are several kind of Dungs, some a little better than others, but still all proper to amend, that is, to repair the

*Emittit humo  
facilem villum  
pulcherrima tel-  
la.* Georg. 2.

*Germinet terra  
herbam vitem,  
&c.* Ge-  
org. 2.

the loss that Earth had sustained in Producing; and thus the Substance of the Earth does not wear out to be at last reduc'd to nothing, or waste so as to give cause to say, that it diminishes, for if it did, where should it be now, after having produc'd so much from the beginning of the World? 'Tis only the Salt of it that diminishes; or to speak more properly, changes place, which, as it may return, as it does, is capable of restoring that Earth to the same Condition it was in formerly.

The Alambicks in Chymistry sufficiently manifest what that Salt is, and show in little what a small quantity of it is required to animate a pretty considerable quantity of Earth.

Upon which, I think I may say, that Dung seems to be in relation to Earths that are of a different Temper, what Salt is in relation to different kinds of Meat, either such as are fine and curious, as Partridges and Sheep, and such as are material and gross, as Beef and Pork, &c. these without doubt can bear a much larger quantity of Salt in the seasoning of them, without spoiling, than the others, since a good piece of Beef, without doubt, requires a much greater quantity of Salt to relish it, than a piece of Mutton, though equally large; and indeed gross Meats are made more palatable by being well poudred, whereas Mutton being salted at the same rate, would be spoil'd.

Besides, as there are some Salts that salt more, for Instance, Bay-Salt, and others less, as white Salt; so as to the heating, or animating of Earth, there are some Dungs which heat and amend more; for Instance, those of Sheep and Horses, and others that amend and heat less; for Example, The Dung of Hogs and Cows, &c. We must prudently make use both of the one and the other; Experience sufficiently justifies this faculty of heating in point of Dungs, in that a certain quantity of Horse Dung heap'd up together will cause a considerable heat, even to that degree, as to convert it self sometimes into real Fire, whereas a heap of Cow Dung never heats it self to that degree.

And, therefore, should a great deal of Horse and Sheeps Dung be laid in light, sandy Earths, which stand in no need of so much heat, it would prejudice them instead of doing them good; those Dungs are too burning; but according to the Advice of the Poet, we might allow them a great deal of Cows-Dung, which is fatter, and not so hot: And on the contrary, what is not fit for dry, hot Earths, is very proper for such as are cold and moist; those, which naturally produce but too many Weeds, want heat to be animated, as it were, to dispose them, to produce others that are better for us.

*Arida tantum  
ne satiare fi-  
ne pingui pade-  
at sola, &c.  
Georg. 1.  
Humida ma-  
jores herbas alit,  
ipsaque jussu le-  
vior, Georg. 2.*

## CHAP. XXIII.

### Of Dungs.

IT will not suffice to have spoken of Amendments or Improvements in General, we must come to Particulars; to which end I think it will be necessary to examin five things, principally in the Case of Dung, which is the most usual of all Amendments.

The First, What Dung is.

Secondly, How many kinds there are of it.

Thirdly, Which is the best of all.

Fourthly, Which is the proper time to employ it.

And, Fifthly, Which is the manner of making so good a Use of it, that Earths may be amended by it, that is, made more Fruitful, which is the Intention of him that uses it.

As to the first Point, I cannot forbear saying, that Dung, being a vulgar thing, and so well known, it seems useless, and almost ridiculous, to endeavour to give an account of it; but yet in order to continue to follow exactly the design I have propos'd in this Treatise, which is not to omit the least singularity of all that belongs to Gard'ning, I think my self oblig'd to speak of this Dung, not indeed to make it known to such as are unacquainted with it, since it would be hard to meet with such, but only to make some Observations upon it, which are very material for the matter in hand.

I say then, that Dung is a Composition of two things, of which, the first is a certain quantity of Straw which has serv'd for Litter for Domestick Animals; and the second, the Excrements of some Animals among it, which has in some manner incorporated with that Straw; neither that Straw alone, though half rotten, is fit to make good Dung; nor yet the Excrements of those Animals without Straw, can be sufficient alone, to induce one to employ them, they must of Necessity be mix'd together to be of use, which is a thing known by every body.

Neither

Neither can any body be ignorant that those who keep those Animals both for Pleasure and Use, have particular Places for them to feed and rest in; which Places have peculiar and different Names; they are call'd Stables for Horses and Mules, &c. And Pens, Stalls and Sties for Oxen, Cows, Sheep and Hogs, &c. Great Hunters have, besides, Kennels for Hounds, but those afford but little of what we treat of in this Chapter. It is usual to place daily under those Animals, and particularly under Horses, a sufficient quantity of fresh New Straw, well spread, which is call'd making of Litter, which is, as it were, a kind of Bed, which serves for them to lye upon, and take their rest, when they are weary, to put themselves again in a Condition to go about their usual Service a-new; this Litter serves then to preserve their Health, to help to recover their Vigor, as well as to keep them neater, and more agreeable to sight.

But that is not all, for after that it must be good for some other thing; this Straw being thus employ'd by the Name of Litter, becomes not only bruis'd and broken by the Trampling and Agitation of those Animals, but their Excrements having imbit'd or soak'd it, changes the colour of it, and half rots it, so that it becomes, as it were, of a different Nature from what it was; and being altogether corrupted, and no longer proper to serve for Litter, there is a necessity of removing it, to put new into the room of it, which in its turn must undergo the same Fate.

This first Litter being taken from under those Animals, and laid aside, is not look'd upon as a heap of common Dirt, to be rejected, we give it the name of *Dung*, now in question; and under that Name, it is found to be, not only a useful, but a very necessary thing for the good of Human kind.

Now that which is the Cause of this new Service it yields, being grown *Dung*, is, that the Excrements of those Animals have communicated unto it a certain quality, or rather a certain Salt, which being contain'd in it, causes it (being heapt up) to heat it self considerably, and at the same time to heat all that is round about it, as we shall explain more at large hereafter.

After having thus explain'd what *Dung* is, if it may be truly said that that Explication was not very necessary, at least it must be allow'd, that the other four Articles are very material to be explain'd, beginning by that which is to give us an Account how many sorts of *Dung* we may use.

The variety of  
*Dung*.

It naturally follows from what I have said above, that as there are many Horses every where, there likewise is a great deal of Horse *Dung*, and a little of Mules, &c. that there is a great deal of Cows, and that Sheep and Hogs afford a small quantity, we may likewise say that the Poultry that is kept in some Houses, as Pigeons, Hens, Geese, &c. also produce some small manner of *Dung*, but it is so very inconsiderable, that it is hardly worth mentioning.

The great Animals in question do not alone contribute by their Excrements, to the Composition of *Dungs*, and the Amendments of the *Earth*, all the parts of their Bodies being once rotten, nay, their very Nails and Bones serve to fatten it. The Leaves of Trees which are gather'd in Autumn, being put in a moist Place, and especially under the drein of a Stable or Pen, being also rotten, may likewise be of some use in Places where Straw and Animals are not common.

The very Ashes of all combustible Matters are of a very good use in this Case, for the small quantity that can be had of them, and not only Ashes, but also rotten Wood, and generally all things which being come out of the *Earth*, are corruptible, becomes *Dung* for the Ground, when put into it again, and there corrupts.

Nay, there are some People, who, in order to multiply the number of *Dungs* or Amendments, maintain, that Turf, and the Earth of high Ways is proper for it; I will speak my Opinion of it in the Sequel, and will only say in this Place, that that kind of whitish *Earth* which is met with in the Bowels of some piece of Grounds, which we call Marle, and seems to be inclin'd to become Stones, must be consider'd as an amendment to help towards the Production of some things, as I will explain in the Sequel.

The choice of  
*Dung*.

Now we have explain'd the diversity of *Dungs*, it will be proper to see what are their particular Qualifications, to the end that this knowledge may teach us to make a good Choice according to the occasions we have for it.

There are two peculiar Properties in the Case of *Dungs*; the one is to fatten, that is, to fatten the *Earth*, and better it, or render it more fruitful, and that is common to all manner of *Dung*, being well rotten, only some more, and others less: The second Property is to produce a certain sensible heat, capable of producing some considerable Effect: The Ancients knew the first, and have not known the second; this last is seldom met with in any but Horse and Mule *Dung*, when newly made, and still a little moist, and indeed those

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fort of *Dungs* are of a wonderful use in our Gardens, and particularly in the Winter; at which time they seem to perform the Office of the great Planet, which animates and enlivens all things, really performing there the same Function which the heat of the Sun is us'd to dispense there in the Summer; as for Instance, being laid in the form of Couches, it serves to afford us all the Novelties of the Spring, viz. *Cucumbers*, *Radishes*, *Small Salads*, and *Melons*, and all that, long before Nature can give it; it serves in great Frosts to furnish us with *Greens* and *Flowers*, and that which is yet more singular, very green *Asparagus*, and those better than the Common ones; it likewise serves to advance considerably the Maturity of *Strawberries*, of *Figs* in Casks, *Pease*, &c. and finally, it serves to make Mushrooms grow at all times.

And if new *Dung* has a peculiar Goodness and Faculty, when it stands possess'd of its first heat, it has another when, without being Rotten, it is old and dry, the heat being altogether past, which is to preserve against, or from, Cold, that which Frosts might in-damage and destroy; and therefore it is us'd in the Winter time to cover *Fig-Trees*, *Artichokes*, *Succories*, *Selery*, &c. Which are all *Manna's* of great Value in Gard'ning, which would perish without the help of *Dung* to cover them: Which is not all that *Dung* is useful for; for, after having serv'd in so many Places, as according to the Condition of all Sublunary Beings, it rots at last; it then serves again to the last Use which I treat of here, and that is, to amend the Ground.

This Amendment or Improvement supposes two considerable Conditions, the one relating to the time which is proper for the doing of it, and the other to the manner of doing it well.

As to the time, we must not imagine that all the Seasons of the Year are proper to employ *Dung*, none but the five moisteft Months of the Year are good for it, viz. from the beginning of November till towards the end of March; those *Dungs* would be of no use in the bosom of the *Earth*, unless they perfectly made an end of rotting there, and nothing but Rain can cause that Consummation; those that are employ'd at other times, only grow dry and musty, and so far from being favourable to Vegetables, they are pernicious and fatal to them, especially when there is a considerable quantity of it; abundance of large white Worms engendering in it, which remain in the *Earth*, and gnaw all the tender things they meet with; whereas the great Moistures of Autumn and Winter making an end of rotting by the degrees, the gross material substance of that *Dung*, the Salt which lyes in it, passes into the interior parts of the *Earth*; and thus this Salt spreads it self in those Places, whence the Plants draw their Nourishment, that is, in the Neighbourhood of the Roots, which alone have the Talent of improving the benefit of *Dung*, and thereby Vegetables make an end of acquiring all the Perfection, which is proper for them, as thickness, largeness, and the rest, &c.

Proper times to  
turn *Earth*.

It follows then, that the Winter is the only Season fit for great Amendments; therefore it behoves able Gard'ners, not to lose a time which is so precious for their Occupation: In order to which, they need neither to mind the Quarters of the Moon, nor the Winds, whatever they be, notwithstanding the Traditions of some of the Ancients, and whatever may be said in some Books of Gard'ning; they are only troublesome Observations, and altogether Useless, and are only proper to afford Matter towards the Imbellishment of Poetry, or, perhaps, to set off some Visionary talkative Gard'ners.

Let us now proceed to the manner of Employing this *Dung* to the purpose: This matter ought to afford us two Instructions; the one is to point out those Parts where the *Dung* is to be laid, and the second to mark out partly the true quantity.

As to the first, it is to be noted, that sometimes there is a necessity of *Dung* largely, and pretty deep into the Ground, and sometimes it suffices to turn the Surface lightly. As to the first, I am not of the Opinion of those who make Beds of their *Dung* at the Bottom of Trenches, whatever care they take of Tilling every Bed largely, in order to mix the *Earth* and *Dung* together, and my Reason, confirm'd by a long Experience, is, that whatever is good in that *Dung*, so employ'd, soon becomes Useless, since it passes too low with the Moistures which force it along, and drive it to such Parts where the Roots cannot penetrate, besides that the Motion which is made in Tilling those Three or Four Beds in the Trenches, instead of contributing to make the *Earth* lighter; which is one of the most material Conditions, only presses and hardens it by the Trampling, which cannot be avoided in Tilling.

Et cui patre  
Johann. Georg.

Therefore, as I have already said elsewhere, I would have the *Dung* used for *Earth*, in the same Manner as Ashes are us'd in Washing, that is, that whereas the Ashes are only laid upon the Surface of the Linen, that is heaped up in the Tub, in order to cleanse it; so the *Dung* should only be laid on the Surface of the *Earth* that is to be Amended. I say

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it again, it is not the gross Substance of the Dung which Fertilises, as it is not the gross Substance of the Ashes which cleanses, it is that invisible Salt which is contain'd in those Matters, Incorporating, wetted with the Waters that wet it, defends with them, where-ever their Weight inclines them, and there produces what it is capable of performing.

But it is not sufficient to know the best Place where the Dung is to be laid, we must likewise examine what quantity may be proper for it: In order to explain this Article, it is proper to know that as some Dungs have a far greater quantity of Salt to Communicate than others; so there are *Earths* which require and want more Amendments than others: I will mean the *Earth* for *Kitchen-Plants*, and not that *Earth* in which *Trees* are to be Planted; for I will have none for these, supposing always that if they have the least Goodness they have enough to Nourish *Trees*, from which we expect Palatable Fruit. He who studies to make Excellent Wine, soon perceives that the use of Dung is directly contrary to his Intention, and that if those Amendments augment the quantity, at the same time it diminishes the Value, though perhaps that defect might have been corrected by Fermentation and Boiling; Therefore have we not yet much more cause to fear for the Taste of *Fruits*, which, without the Advantages of Boiling, are to be transmitted directly from the *Trees*, to the Mouth?

And when the *Earth* is naught, I can not, as I have already said, forbear blaming those who lose their Time in Planting there, instead of getting better *Earth* brought there, the quantity cannot be Considerable, nor consequently the Charge, considering that none will go about to Plant many *Trees* in ill Grounds.

But if, contrary to my Sentiment in this particular Case of Planting of *Trees*, People will be obstinate in dunging of Trenches, where they intend to Plant, I am willing to Explain the Manner I think most proper for it, to save Charges, and to have the Work better done and sooner.

I suppose, for Instance, that a Trench six Foot deep is to be prepar'd, either along a Wall to plant against it, or about a Square to plant *Dwarfs*; First, I would have the quantity of Dung one has Examind, either Horle or Cow Dung, which are the two sorts that are most Commonly us'd, and which are most plentiful; this Knowledge will teach us whether we may use a great deal or not: After this I would have it laid in equal distances, all along the Trench that is to be made, and the overture of the Trench dug three Foot deep, and about a Fathom upon the breadth propos'd, so that before we go about to employ the Dung, we may have an empty free Space before us; I would likewise have three Men, two with Spades to stir the Ground, and one with a Pitchfork for the Dung; and lastly, I would have two of them take that *Earth* that is to be dug, and throw it at the farther End of the Empty Place; so that the height of the Trench may be fill'd, and that half a Foot higher than the adjacent Surface, taking care to place the *Earth* that lay on the Surface at the Bottom, to the end that the *Earth* which lay at the bottom, may in its turn become the Surface of the new Trench; this *Earth* so thrown, in the manner I mean, makes a natural Declivity, at the bottom of which all the Stones will fall by the same means, which must be remov'd immediately; and while the two Men thus throw the *Earth* which forms this Declivity, I would have the third, who shall be remaining upon the edge of the Trench, to take the *Dung* with the Pitchfork, and throw it without Intermission, not into the bottom, but only upon the top of the Declivity in question, and there spread it, that it may be so well dispers'd, that no great quantity of it may lye together; by this means, supposing always the Work-men act briskly, and understand each other, two very material things are done at once, and in a small time, with little Charge; the first is, that the *Dung* is plac'd and mix'd in the *Earth* as it should be, and the second, that this *Earth* being stirr'd from top to bottom, grows easie and light, as it should be.

I must not forget minding those who dig along a Wall, to take care not to come too near the Foundations, for fear of indamaging it, the Wall might be in danger of falling; a small slope of hard Ground must always be left untouched against it.

When besides the Trench for *Trees*, there are to be others round about all the Squares or Ground Plots destin'd for *Kitchen-Plants*, in a Garden not having the good Qualifications that are to be wish'd for, the same Method must of necessity be us'd, multiplying only the number of those that are to *Till*, proportioning the number of those that are to spread the *Dung* accordingly; there must always be the same depth of *Earth*, ever making the first overture of the Trenches about a Fathom broad, it being for Example of the length of the whole Square, to which end the *Earth* that shall be taken out of the Trench, must be laid along the Square that is to be fill'd, which shall serve to fill up the

No Dung for  
Trees.

the Gage that shall lay empty at the end of the said Square; in the mean time the Dung must be brought either in Baskets, hand-Barrows, or otherwise, into the Neighbourhood, or near that empty Place; and a sufficient number of People shall be employed to spread it upon the top of the slopes, by degrees, as the others continually throw new *Earth* towards the empty Places.

I warrant that with such a concert of Workmen, well skill'd in their Work, the Ground may be dispos'd to produce very fine, and very good *Legumes*, care being taken finally to make an universal *Tillage* to render all the Surface even.

I would only have People observe, that in case the *Earth* which wants to be amended or improv'd, is naturally dry and sandy, *fat Dung* must be employ'd, for Example, Cow-dung, or else Horle-dung, which shall have been rotten in a Morish Place; I seldom mention the Dung of Hogs, because, that besides its being scarce, it has an ill flavour, which hinders People from desiring it, it is capable of infecting the Ground, and giving it an ill taste, which would infect the *Fruit* sooner than better it: When they are coarse, strong, moist *Earths*, the largest and dryest Dung will be most proper; for Example, Horle and Mules Dung, never putting too much, nor too little, but a moderate quantity, excess being dangerous in these Cases; on the other hand, putting none at all in the *Earth* in question, is a defect that would soon be perceiv'd; as likewise putting but too small a quantity, is a help, which not being sufficient, must be look'd upon as useless, especially in lean *Earths*, from which more is requir'd than it is able to produce; that is, abundance of thick well fed *Legumes*.

The most reasonable measure for employing of that Dung, is to lay a Basket full, and that of a moderate size, upon the length of every Fathom of slope, when it is about the thickness of a foot of *Earth*; and thus the length of twenty Fathom to the breadth of six foot, and the depth of three, will consume sixscore Baskets full, of that moderate size, that is, about such a size as a Woman may partly be able to carry.

And when there is not Dung enough to make the mixture I have explain'd here, the small quantity there may be of it must only be spread upon the Surface, spreading it with an even hand; after which *Tilling* it sufficiently about nine or ten Inches in depth, it must be buried so that it may no longer appear on the out side, and yet not so deep as to be out of the reach of the *Roots* of *Plants*.

The Excrements of Sheep and Goats are very fit for that kind of Dung, and it will suffice to spread about two Inches thick of it, that small quantity will contribute to amend the *Earth* as much as a greater of Horle or Cow-dung.

And in truth, I look upon Sheeps-dung, as the best of Dungs, and that which has most disposition to fertilize all manner of *Earths*; the Treatise of the Culture of *Orange-Trees* will show more particularly how much I value it above all others.

*La Poudrette*, and the Dung of Pidgeons, and of Poultry, may also make some amendments, but yet I seldom use them, the one is too stinking, and pretty scarce, the others are full of little Fleas, which sticking to the *Plants*, are very prejudicial to them.

As for the Excrements of Aquatick Animals, or such as commonly live in Water, it is stark nought, as well as that which comes from Cunny Warrens, witness the Sterility that appears about the Clappers; the rotten Leaves of Plants occasion blackness and cold, which, far from amending, rots the new *Plants*, and therefore it must not be us'd at all.

The Leaves of *Trees* gather'd up, and rotten in some moist Ground, become rather a kind of Soil than Dung, and are fitter to be spread to secure the *Earth* from parching, than to fume the inside of it.

*Terrau* or Soil is the last Service we receive from Dung, the Dung having serv'd to make Couches, consumes it self to that degree, that it becomes a kind of *Mould*, which then is no longer employ'd like Dung to fatten, but like *Earth* which produces small *Plants*, and so seven or eight Inches of it is laid upon new Beds for *Sallads*, *Raddishes* and *Legumes* that are to be transplanted, or to remain, as *Melons*, *Cucumbers*, hard *Lettuce*, &c. and about two Inches thick of it is likewise laid over *Earths* new sown at the Spring, and in the Summer, when they are too dry of themselves, or inclin'd to harden and split easily by heat, the Seeds would dry up in the first, and could not penetrate the Surface of the other.

Therefore this Soil is us'd, which preserving its Moisture occasion'd by *Tillage*, or Waterings, makes the Seeds rise easily, and shoot with Success; besides, it has another property, which is, to hinder the Birds from picking off the new Seeds.

Asbes of all kinds would be of great use to amend the *Earth*, if there was enough of it; but whereas we have but little of it, it is only us'd about the Feet of some *Pig-Trees*, or some other *Trees*, where they are not useless.

Some People have a particular Value for *Turf* to make Amendments, but I look upon it in a different Manner, that is, as being fit to produce of it self, and not to Fertilize other *Earth*; and I have a great Value yet for the *Earth* that lies under that *Turf* which we call new *Earth*, the which having never been wrought, is consequently full of all the Fertility that can be expected from New *Earth*, and therefore happy are those who can make whole *Gardens* of such.

But when People have not a sufficient quantity to compass this, and yet have a reasonable Stock of it, I would have them employ it either wholly for *Fruit-Trees*, or, at least, in the same manner as I have caus'd Dungs to be Employ'd for deep Amendments.

#### C H A P. XXIV.

*To know whether it be proper to Dung Trees.*

I Cannot approve the Sentiments of those, who being Infected with the Vulgar Error in relation to Dungs, use it indifferently every where, even so far that to make a grand Maxim of it, they say in a pretty popular manner, that, especially in relation to *Trees*, it is impossible to afford them too much Kindness, which is the soft and sparkish Expression they use in speaking of what we vulgarly call Dung.

But, in order to examin whether their Opinion is any wise reasonable, I desire them to answer five Queries I propose upon that Subject.

*First*, Whether they mean all manner of *Trees*?

*Secondly*, Whether only *Fruit-Trees*?

*Thirdly*, Whether, if those *Fruit-Trees*, they mean all of them in General, to preserve such as are Vigorous and re-establish those that are Infirm?

*Fourthly*, Whether they have a certain Rule for the quantity of Dung that is to be allow'd to each, and for the place where it is to be laid?

And *Fifthly*, Whether they should be Dung'd in all manner of *Earths*, whether good or bad?

I dare not believe that their Opinion in relation to Dungs, extends to all *Trees* in General, since every body knows that the *Trees*, of Forests, those in the open Fields, and those that serve for Avenues to Houses, thrive commonly very well without ever having been Dung'd: In case those Gentlemen allow this to be true, as to *Trees* that bear no *Fruit*, they condemn themselves unawares as to *Fruit-Trees*, since both the one and the other receive their Nourishment in one and the same manner, that is, by their *Roots*; and indeed those *Roots* working in a natural *Ground*, when it is passably good, never fail of finding enough of what is necessary for them to live.

But however, in all probability, those Gentlemen only apply the Maxim in question to *Fruit-Trees*; and yet really I cannot believe, that they dare own that they mean all those *Trees* in General, since it would be ridiculous to say, that one and the same thing can be equally good; for so many *Trees* of such different Constitutions, some more or less Vigorous, and others more or less Infirm; some Kernel, and some Stone *Fruit*, &c. and yet they have never Explain'd themselves upon that difficulty, and have never spoken upon this Matter but in general Terms; in which, as we have already said, they make use of the Sparkish Term of Kindness, to perfwade the more agreeably.

Neither do I believe, that if they were press'd to declare their Opinion, they would say, that they mean the most Vigorous, since great Vigour appearing inconsistent with the abundance of *Fruit*, it would be an ill Expedient, in order to get *Fruit*, to have recourse to a thing they should believe proper to maintain that Vigour, and perhaps to augment it; moreover Dung being only look'd upon as a Remedy, and Remedies being only us'd for the Disease'd, it follows from thence, that that Dung is not to be

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us'd for those *Trees*, which, far from being any wise Infirm, have all the Signs imaginable of perfect Health, throughout their whole Extent, supposing then that Dung were capable of Improving *Trees*, still I do verily believe, that it would sooner harm these, than procure them the least Advantage.

Therefore we may conclude, that their Opinion is, that Infirm *Trees* stand in need of the Assistance of Dungs: Now in order, if possible, to disabuse the World of such an Error, I affirm sincerely, that by a study'd Experience of a long Series of Years, I do know with certainty, that all the Dung in the World can operate nothing in Favour of any *Tree* whatever; I had liv'd long in that Common Error, my Curiosity having begun by that, as well as by the Rote of the Declinings of the Moon, &c. but am now happily undeceiv'd, and all those who will take the Pains to inform themselves of the Truth thereof, without prejudice, will certainly conclude with me, that at best it is but a useless Labour and Expence; besides, I declare that it is a great Happiness when it does not prove prejudicial; those Dungs, as I have hinted elsewhere, being apt to Ingender Worms which kill the *Trees*, and at most all the Virtue that is in them, extends no farther than to produce small *Roots*, which *Roots*, though really good for small *Plants*, can no wise contribute towards the forming of those fine *Shoots*, by which we judge of the Vigour we desire in *Trees*.

But in order to enter a little farther into the convincing Proof of this Truth, which I establish, I should be glad to be inform'd exactly, what an Infirm *Tree* is, it is a matter I have enlarg'd upon sufficiently in the Treatise of the Distempers of *Trees*, &c. therefore I shall now only say, that, for Example, an infirm *Pear-Tree*, is not always to be concluded so, by reason of its producing Yellow *Shoots*, since there are some that are very vigorous and yet produce Leaves of that Colour; they are only such upon which some thick old *Branches* die, or such of which the Extremity of the new *Shoots* wither, or such as produce none at all, and remain scabby, full of Cankers and Moss, and yet blossom exceedingly; yet little of the *Fruit* knits, and that which does knit, remains small, stony and bad: And when the *Tree* happens to produce large Yellow *Shoots*, which happens frequently, to some *Pear-Trees* Grafted upon *Quince-Stocks*, which being planted in a dry lean *Ground* are naturally in a good Case, this defect of Yellow Leaves proceeds from that, some of the principal *Roots* lying level with the *Ground*, are parch'd by the great Heats of the *Summer*. Now the Dung which is employ'd for Amendments, and is consequently put pretty deep into the *Ground*, can no wise prevent this.

On the other hand, if any of the *Branches* of that Infirm *Tree* chance to die, that Defect may proceed from that, either the *Tree* may be overburthen'd with *Branches*, compar'd to the small Vigour of it, so as not to be able to Nourish them all, or else from its being planted too high or too low; or lastly, from that the *Earth*, which is to Nourish it, is either bad or worn out, and especially, when the Foot of the *Tree* has many dead *Roots*.

As to the first Case, Dung cannot discharge that *Tree* from its Burthen: In the Second, it cannot make it to be better Planted: And in the Third, it cannot revive the dead *Roots*: And lastly, can produce no thick new ones; for Dungs have never been able to Effect that, neither great Dungs, though never so Rotten, nor the small ones we call *Soul*. Thus as long as it produces no thick new *Roots*, we must expect no fine new *Shoots*; and while none of those kind of new *Shoots* are produc'd, the *Trees* will always remain ill-favour'd, and the *Fruit* will never be well-condition'd in its kind, nor give us Satisfaction by the Abundance of it.

To this I add, that if Dung had the Faculty of rend'ring a weak *Tree* Vigorous; in the first place I should have Experienc'd it at one time or another, after having try'd it so often; which being, I should be much to blame to dissent from an Opinion so well Establish'd, and to endeavour at the same time to introduce a new Doctrine in the Room of it, which, instead of doing me any Kindness, would only serve to turn me into Ridicule. In the Second place, if Dungs could afford Vigour, especially to old Infirm *Trees*, that Advantage would certainly be attended by a very great Inconvenience, which is, that it would occasion the Shooting of abundance of False Wood or Suckers, and destroy the Disposition of that *Tree* towards the producing of *Fruit*; since, contrary to the Masters Intention, it would cause those *Buds* which were grown round for *Fruit* to shoot out for Wood, which Wood must of necessity be remov'd as being ill-condition'd and ill plac'd.

I explain more particularly in another Place, what is most proper to be done in such a Case, and that is at the End of the Fifth Book, where I propose Remedies for the Infirmities of old *Trees*.

But supposing it were good to Dung *Trees*, which I do not allow, what true Rule can be had for the more or less quantity of Dung each *Tree* may require: Will a moderate quantity produce the same Effect as a great one, or will not a great quantity perform more than a small or moderate one? Moreover, in what place shall that Dung be plac'd, shall it be near the *Stem* or *Foot*, or at a distance from it? It will be useless near the *Stem*, since the Extremities of the *Roots*, where all the Action is perform'd, being distant from it, can receive no Benefit by it, and yet it is commonly laid particularly in that place, therefore those Amendments should be plac'd near those Extremities, but how shall one be certain in what part they lay, especially since those Extremities stretching out Yearly, consequently Yearly change their place, &c.

I conclude by this Vulgar Observation, That Infirm *Trees* are met with in good *Grounds*, as well as in ill ones; will the same Remedy be proper for both? There appears to me a great deal of difficulty to answer those three last Questions justly; so that those certainly engage themselves in a great Confusion, who will have the only Remedy for *Fruit-Trees* to consist in Dunging, either to preserve their Vigour, or to restore that which they have lost. I find much more Advantage, and less Charge, in using new *Earth*, than any Dungs, whatever they be: I explain in another place the manner of Employing those new *Moulds*, which has occasion'd me to say in another place, that one of the chief Conditions, to succeed in the planting of young *Trees*, provided they be good, and the *Roots* well Prun'd, is to plant them in passable good *Earth*, and such as has never been Dung'd.

#### CHAP. XXV.

*What Sort of Earth is most proper for every kind of Fruit-Trees.*

*Et quid quaque  
ferat regio, &  
quid quaque re-  
cuset, &c.  
Georg. 1.*

I Conclude this Second Part, after having said that the Wildlings of *Pear-Trees* and *Apple-Trees*, and even those we call *Paradise*, and likewise *Plum-Trees* and *Fig-Trees* agree very well with all manner of *Earth*, whether hot and dry, or cold and moist, provided the *Ground* be deep enough, that is, at least two good Foot and a half, or three Foot deep; *Fig-Trees* do not require near so much.

*Quince-Trees* do not thrive well in dry light *Grounds*, they grow yellow too easily; *Almond* and *Stone Peach-Trees* thrive better in this than in strong *Earth*, in which they are too subject to Gum; those strong *Earths* are fitter for *Plums*, *Merisiers*, or small bitter *Cherries*, *Goose-berries*, *Raspberry Bushes*, &c. *Vines* thrive better, and produce better *Grapes* and better *Wine* in certain dry *Grounds*, than in strong and cold *Earth*; *Cherries* thrive pretty well in dry light *Grounds*, but yet better in clear *Mould*.

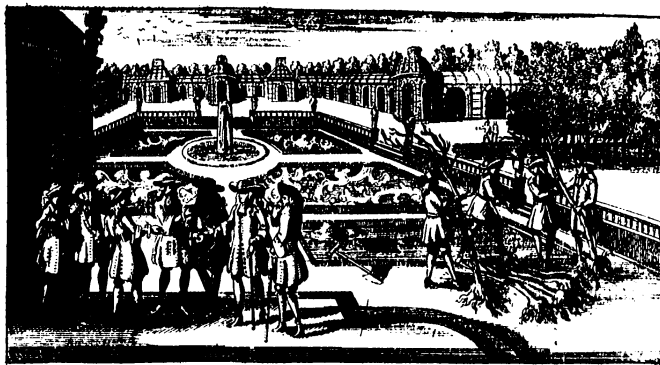
After having Explain'd what sort of *Earths* are best for every kind of *Plantations*, one might think to draw necessary Consequences for the kinds of *Fruits* that are Grafted upon those kind of Stocks; for Instance, for *Pears* Grafted upon free Stocks or *Quince*; for *Peaches* upon *Plum* or *Almond-Trees*, &c.

But yet, as we shall declare in the Sequel, *Earth* has not the same Effect as to the good Taste of *Fruits*, as it has as to the Vigor of *Trees*. *Winter Bon Christien Pears*, *Pettibon*, *Lansac* and *Thorn Pears*, &c. will always remain insipid, and most of them stony or mealy in a cold moist *Ground*, whether Grafted upon a *Wildling* or *Quince-Stock*, especially for *Dwarf-Standard*, the same with *Peaches* and *Pavies*, &c. Those kind of *Fruits* do particularly require a pretty dry *Ground*, or at least such a one as is drain'd well by *Gutters*, or studied Declivities, the *Ground* being naturally moist: In fine, generally speaking *Trees* are commonly Vigorous in strong *Earth*, but the *Fruit* seldom acquires that delicacy of Taste there, it should have, tho' which they meet with in dryer *Grounds*.

It is not sufficient to have our *Gardens* well Cultivated by *Tillage* and Amendments, besides this, they must be kept very clean, that is, the Walks must always be kept very free from Stones and Weeds, always firm under Foot to walk conveniently and with ease, the *Ground* likewise clear from Stones and Weeds, the *Trees* always free from *Caterpillars*, *Snails* and *Moss*, &c. Finally, useful *Gardens*, should be as pleasing, when old made, as they are displeasing when new, in which particular they differ from *Parterres* or *Flower Gardens*, which are never so neat, or agreeable to sight, as the very day they

they have pass'd through the *Gard'ners* Hands, being then adorn'd with *Flowers* newly planted, the Walks being newly Gravel'd and very smooth, the *Green Turf* fresh, &c. In fine, if I may use the Expression, at that time, they are not unlike a new Bride adorn'd with Powder, Patches, Ribbons, Nosegays, &c. to render them the more pleasing; whereas our useful *Gardens* which should in some measure resemble a good Housewife, must have a natural unaffected cleanness, without any studied constrain'd Adornments.

*The End of the Second Part.*



OF

## FRUIT-GARDENS

AND

## Kitchen-Gardens.

## VOL. I. PART III.

*What is to be done in all sorts of Gardens, as well in making a judicious Choice, as in proportioning and placing the best kinds of Fruit-Trees, whether Dwarf, Wall-Trees, or Standards.*

**A**MONG the *Fruits* that are at present in use in the World, It may without prejudice be said, There are some so Exquisite and Perfect, that nothing is known more Delicious to the Taste, and perhaps, hardly any Thing more useful for the Health: And accordingly we are accustomed to make such frequent use of them at all times, That we are almost persuaded to Rank them among Things absolutely necessary to Life; we hardly meet with any body that can be without them, so that there is nothing almost but People will do to have some; which is the Cause, That how Magnificent and Abundant soever any Great Feasts may be, they are still found Fault with, if Fair and Good *Fruits* be wanting to set out their Lustre, and to help to leave behind them a certain Idea of Greatness in the Minds of the invited Guests; and thence it also comes to pass, That the most sumptuous and stately Country Mansion in the World, is thought to want one of its principal Ornaments, if it be not accompanied with Fair and well Planted and Contrived *Fruit-Gardens*. And therefore Nature, which does nothing in vain, has been careful to provide us almost an infinite Number of different sorts of *Fruits*, and at the same time has inspired us with a strong Inclination, not only to Cultivate those of our own Climates, but also to multiply them, by adding to them, those of

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Foreign Countries, so that to speak Truth; we ought to look upon the abundance she has blest us with in this kind, as one of the greatest Obligations we have to her; and it seems, as if all she had done besides, to make us Live and Subsist, would be thought very inconsiderable, if we were deprived of the Treasure the *Gardens* afford, a Treasure that is to us a very great Assistance: For in effect, What is there more Precious or Commodious to Life, than to find good *Fruit* Planted in all inhabited Countries; and what is more Valuable to us, than to have abundance of them at all seasons of the Year?

And here a goodly Field offers it self, were I minded to pursue it, in praise of those Rich Presents which the Earth furnishes us of her own accord, even in the obscurest *Forests*, and most horrid *Deserts*: But that is a Task that belongs not at all to my Profession, and much less is it any part of my present Design, and therefore as I am sensible how incapable I am to undertake it with success, I shall not venture upon it, but shall rather confine my self within the modest pleasure of Communicating to the World, what by long Experience I have found useful to Instruct Men to make the best Improvement of those Master-pieces of Nature, and to assist them to add still more and more Perfection to them by their Industry.

Now, though under the Name of *Fruits*, we ordinarily comprehend all the productions of *Gardens* that go under that Appellation, yet I pretend not here to Treat of any of the *Fruits* of the Lesser Class, such as *Strawberries*, *Raspberries*, or *Gooseberries*, nor of *Musk-Melons* neither, though they be certainly *Fruits* most Excellent in their kind; they being Articles I reserve to speak of in our *Kitchen-Garden*, of which they are to constitute a Part, but I shall only Treat here, of such as grow on Trees, and which, when they Excel in their kind, and are planted in a proper Seat, and well qualified, make the True Ornaments of *Gardens*; for unless they be indeed of such sorts, there are many kinds of *Fruits* that instead of doing Honour, do rather a Disgrace, to the Master that Cultivates them.

And after I have discoursed of the good *Fruits* of all kinds of Trees, I shall also speak of those sorts of *Grapes*, which are so much Esteemed by all Persons of Quality.

I cannot proceed any further without taking Notice to you, how much I am surpris'd at the Contemplation of all the *Fruit* I see, as well in general, as particular: For as to particular kinds, I am very much, having made very exact Descriptions of them, as well of their Inside as Outside, and that both of *Kernel-Fruits*, and those with *Stones* or *Shells*, as also of *Figs* and *Grapes*, as will be afterward seen; inasmuch, that of *Pears* only, I can affirm with Truth, that I have Seen, Tasted and Describ'd above three hundred several sorts, all different one from another, without finding all this while above thirty Kinds that were Excellent enough to my Taste, to merit the Character of having regularly more good Qualities than bad ones.

I expect to find some curious Persons, whom my Opinion in matter of Choice, will not please in all things: But let them permit me, if they please, to make a most humble Request, which is, that before they censure the Esteem, or Dislike I express for certain *Fruits*, they would first Examine very particularly my Intention, which chiefly tends to the Establishing a continual Succession of choice good *Fruits*; and after that, they would Remember, that Peoples particular Palates are not to be disputed; that being an incontestable Point, and in the next place, that great allowances are to be made to the fickleness of Seasons, of which we are not the Masters, as also of the diversity of Soils and Climates, which is almost infinite, and to the Nature of the Stock of the Tree, which is sometimes Good, and sometimes Bad; and lastly to the Manner or Figure in which the several Trees grow and produce.

They are all points that require a great deal of Consideration, and very much serve to Balance the Opinions of those that would judge of them. There are sometimes ill *Pears* to be found among the *Virgoulets*, the *Lechaffreets*, the *Ambrets*, and the *Thorn Pears*, &c. And but Scurvy *Peaches* among the *Minions*, the *Maudlins*, the *Violets*, the *Admirables*, &c. And in Fine, there are some bad *Plumbs* among the *Pedrigons*, some bad *Grapes* among the *Muscats*, and some bad *Figs* among those that are most Esteemed, &c. And is not that enough to astonish any Curious Person that has applied himself so much as I have done, to search into their Nature, and should I be excusable if I were so disingenuous as to suppress the great Observations and useful Reflections I have made thereupon, from which I have at last drawn this Conclusion; That although in a certain sort of good *Fruits*, there may be some defective, yet it follows not from thence, that the whole kind should therefore be rejected, nor that on the other side, we should put any great value upon another kind, because, though known, by competent Judges in matter of *Fruits*, to be of a bad sort, it may by some lucky hit, have yielded some tolerable good ones, which some less delicate Palates may

may be Enamoured with? For, in the first place, all the World is agreed, That of *Fruits* considered according to their Nature, there are three Classes, that is to say, there are some very good, and some very bad ones, and lastly, That there are some again, that cannot well be comprehended under neither of those, but can only be lookt upon as *Fruits* simply tolerable, and but indifferently qualified; And it is only those of this last Rank, that finding here and there some Friends and Patrons, give occasion to all Disputes arising about the Choice of *Fruits*, for seldom it happens, but that all are unanimous in Praising the First, and Rejecting the Second Sort, for we see that a good *Russet*, or *Virgoulee Pear* is generally Esteemed, and a *Parmain Pear* or *Pear of Fontenabie*, as much decried every where; But 'tis not so with a *Doyenne*, or *Dean Pear*, or a *St. Lezin*, &c.

It is likewise granted, that, for Example, such a *Fruit* may prove ill one year, or in such certain Expositions or Placings, which may have appeared good several years before, or in other Expositions, and again on the other side, that such or such a *Fruit* may prove good this year, which was not to be endured some preceding years.

And, in Fine, it is also agreed on all hands, That in one sort of Soil, Climate and Figure of a Tree, such *Fruit* proves good, that always regularly proves bad in a different Climate, in another sort of Ground, and another kind of Figured Tree. For Example, That which perhaps produces good *Fruit* in a full and open Air, will not produce nothing nigh so good in the Form of a Dwarf Tree, &c. Nor every Plant that prospers against a Wall, have the same Destiny in a full Air, &c. Nor every *Fruit* that proves good in a Sandy Soil, arrive to the same perfection in a moister Ground, &c. And therefore I shall make as exact a Discussion of this matter as 'tis possible, that I may be the better able to come to a decision in the point of Choice, and of the order of Preference, which is the scope of my present discourse.

And besides, as it is probable, I have not yet attained the knowledge of all the several Sorts of good *Fruit* in Europe, and much less in the rest of the Universe; there may perhaps be some which might thrive in our Country, and whose Excellence, were it once known to me, might induce me to make some alteration in the disposition I am going to Establish; I grant that such a thing may be; but yet, I am persuaded, there are no new sorts produced, so I do not say; but that from time to time, some sorts may be discovered, that after having remained a long time hid in the Obscurity of certain remote Regions, may come at last to be known and admired by the great ones of the World; nay, we have several sorts amongst those that are now reckoned most exquisite amongst us, of which I dare affirm, that no mention was made in the first years of my Application to Curiosities of this nature.

And therefore I shall not fail to make the best Advantage of all such Novelties as fast as they shall come to our hands, and I heartily exhort all those that shall see this Treatise, that they would testify to the Publick the same Zeal which in this respect, I make profession of: For this at last is certain, that I would not venture to speak my particular Thoughts concerning this matter of the choice and proportion of Fruits, but after a long Labour and Experience in their Cultivation; my design in so doing was at length to give such advices as might be securely followed, and with assured success practised in a good part of this Kingdom, and in all Climates any thing like it, and 'tis in prospect of this end, that I have entertained above these Thirty Years, a particular correspondence with the most part of the Curious of our Age, as well at Paris, and in our Provinces of France, as in Foreign Countries, and the neighbouring Kingdoms; I have made it my study to procure every where as many Illustrious Friends in the Curiosities of Gard'ning as I could, that I might profit as much as was possible by their Light, and their rich Acquisitions, while I endeavoured at the same time not to be unuseful to them on my side; And as I can affirm without Vanity, that hitherto I have not succeeded amiss, so the World may be assured, that I will never discontinue to Labour with all the Care imaginable, to draw into our own Soil, what Fruits are most considerable in other parts; which is as much as to say, in a Word, That I pretend not only to Satisfie and Regulate my own Curiosity in this matter, which is not small, but also that of other honest and ingenious Lovers of Gard'ning, which is no less eager than mine.

Now though it be not discommendable, to be always upon the Quest of the Discovery of some new *Fruits* still, that may deserve our Care and Cultivation, which is what I am always doing without intermission, yet it seems to me, that at present we are already in a Condition to be able to boast of a store sufficient to Form Gardens and Orchards reasonably well furnished with Fruits for all Seasons of the Year, so that I believe I may say there is no great necessity we should be over solicitous in seeking out any more: About five and twenty, or thirty years ago, we could not have said the same, it being an undoubted truth, that our Fathers were much less rich in these delicious Treasures than we.

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However, we cannot but ingeniously acknowledge, that the Months of *March* and *April* are not so happily provided for as the rest, they wanting good Fruits that are tender and buttery; for those sorts of Pears that remain for the spending of those Months, have not the Gift to please like those that went before them, nor as most of them themselves had formerly, they seeming every day to lose more and more of their ancient Reputation; but till we have better to fill up their Places, we must be content to make the best of them we have; though, upon the whole matter, I think we shall not be over unhappy, if our *Boncretien-Pears* which are last ripe, be provided with all the good Qualities they are capable of; for without doubt there are some very good ones even in that Season, and then those Apples that are left, and which usually last till the Month of *June*, taste well enough some curious Palats towards the end of Winter, and at the beginning of the Spring; but to say the Truth, they are not in any great number, nor those of the principal Sorts.

For the better Establishing therefore and authorizing my Judgment in such Fruits as are known to us, I can assure you, and you may believe me, that I have not been only content with seeing, tasting and examining them myself for several Years together, without the least partiality, but because I would neglect nothing that might assist me to make a well-grounded determination in the matter, I have held frequent Assemblies of curious Persons, and such who were perfectly well skill'd in things of that nature, and that were perhaps Men of as delicate and exquisite Palats as any in the Kingdom.

After so many Precautions and Experiences, I at last resolv'd to undertake this Treatise; and the better to succeed in it, and take occasion to declare what is good or bad in each particular sort of Fruit, with the different names under which they are disguised, according to the different Countries where they are found; for the number of those Fruits that have but one Name, and particularly amongst Pears; as, for Example, the *Boncretien*, the *Russet*, the *Burred Pear*, the *Messire John*, the *Portul*, &c. is but very slender; but as for other Pears, Plums, Peaches, Apples, &c. it is quite another case with them, there being few of them without two or three, and sometimes more Names.

Therefore I thought my self obliged first, to endeavour to draw out the Picture and Description of each Fruit, and to make it big enough, that it might be able to give the more lively Instruction for a thing which I judge necessary, which is to learn a Man to distinguish more easily, as well by the Eye as the Taste, the only true Name which each respective Fruit ought to have: And that, without doubt, will be the same which will be found in use amongst the Able and Curious in these Matters at Court; the rest of the World, as well in these as other things, being apt to follow exactly the Modes and Manners practised there.

From such Determination of the Name of each Fruit, well Authorized by the Description which I shall make of them, it will, I hope, come to pass, that Gentlemen will no more fall into the Inconvenience of being pester'd with bad Fruits, under the names of good Ones, nor of having one sort under different Names, and consequently of being so imposed on as to be made to believe they have a great many sorts, when they have but a few, considering the number of Trees in their Gardens. I shall place those Descriptions in such passages where I shall decide the choice of each Fruit in particular; and as I have elsewhere said, they are intended only for those that will take the pains to read them: As for others, that desire only to be resolv'd in short, which are the good sorts, and what proportion of each, they are to observe in their several Gardens; they will find at the end of this part, a little Abridgement, where they may presently satisfy themselves.

In the second Place, I thought it would not be a little conducing to my purpose, to suppose I am going to give my advice to a great many new curious Gentlemen, one after the other, who are all desirous to be planting Fruit-Trees, but very much perplexed how to determine either what sorts of Trees, or what numbers of each sort they shall fix upon.

Whereof the first, perhaps, has not room for above one Plant, whether it be in form of a Dwarf-Tree or a Wall-Tree; a Second has place but for two, but another has room for a hundred Trees, and another for as many more, &c. and all of them are studying what Choice to fix upon, and that with a great deal of eagerness too; for nothing is so hot upon the Design as are the Young Curious's in Gard'ning, who always are big with longing to see their Gardens made up, and that quickly too, and yet none of them know where to begin, having yet received no directions from any body Skill'd in those Affairs.

To ease them therefore of their Pain and Perplexity, I shall fancy my self in the place of every one of them one after the other, that I may be the better able to Counsel each of them to do what I would actually do myself, if I had that to do which any one of them would undertake; so that sometimes you must suppose me some curious Gentleman that

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would plant but a very small Garden, sometimes one that would cultivate but a middling one, and sometimes another that would form a very great one: And I shall act all these several Personages, not only to be able to give my more effectual Assistance in well-forming new Plantations, but in reforming old ones too, when ill contriv'd; so that, by this means, I pretend, that, after a few Years time, every one of those Gentlemen that will take my Advice, shall infallibly find that pleasure in his Gardens, that he proposed to himself to enjoy in them.

It may be objected, That it is not very ordinary to have Gardens so little to admit of the planting but of one Tree, or two of each sort ; but though that were true, as it is not, witness the little Gardens of so many Religious People in Convents, and of so many petty Burgeesses in Cities, &c. yet would I demand the Liberty to suppose such a Cafe, as a thing not only feasible to my Design ; but which appears to me more necessary than any thing, to make me be the better, and more advantageously underflood by all the World.

**Advertisements.**

And this being then supposed, I shall first advertise you, That among all sorts, whether Kernel or Stone-Fruit, there are some that I would willingly plant in a Garden of a certain bignesse, which yet I have not esteem enough for, to Plant in one of a smaller Extent, it being easie enough for a great one to receive any thing that is to be found in a little one, though the same Consequence from great to les, does not appear to me so feasible to be drawn.

Besides, there being different Manners and Forms of having *Fruit Trees*, I am to advertise you in the next place, That, for Example, as to *Pears*, there are some that I would seldom plant in any other Form than that of *Dwarf-Trees*, as the *Buttered Pear*, or *Burrettes* and *Virgoules*, &c. and others again, which I more willingly raise in the Figure of high *Trees*, as are all the *Fruits* of an indifferant bigness, and more especially such as are apt to doughy and infipid, such as the *Petit-ans*, the *Sucre-verts* or *Sugred-greens*, the *Thorn-pears*, the *Louffe-bonnes* or good *Louffas*, the *Lansacs*, &c. And that there are some that regularly bear not well any where else but against Walls ; as *Boncretiens*, *Bergamots*, *Little Muscats* or *Musk pears*, &c. and others again that will prosper well enough in what Figure or Place (soever you plant them) as *Rufflets*, *Robines*, *Lechasseries*, *St. Germain*, &c.

In fine, There being also *Soils* of several Natures, and *Gardens* of different Situations, I must likewise advertise you, *First*, That there are some *Fruits* which delight only in dry Grounds; as, *Peaches*, *Muscats* or *Musk pears*, &c. and others that prosper well enough in *Soils* that are a little moist, as *Cherries*, *Plumbs*, &c.

Secondly, That there are Grounds that will not agree indifferently with all sorts of Plants; as for Example, *Peaches* upon *Plum-tree Stocks*, and *Pear-tree Gruffs* upon *Quince Stocks*, love rather fat than dry *Soils*; and on the contrary, *Peach-graffes* upon *Almond-trees*, and *Pear-tree gruffs* upon *Frank* or *Good-Kernel-Stocks*, prospering both well in *Sandy Grounds*.

Thirdly, That there are some Fruits that do not ripen well, but when very well sheltered from the Cold: as *Muscats* and *Figs*, and particularly about *Paris*, and others that endure well enough the open Air, as all Red Fruits and most Kernel Fruits.

*Fruitfully and Lightly*, That moist Grounds are proper to produce large *Fruit*, but not to make them so delicate, without an extraordinary Care and Cultivation, whereas dry *Soils* are qualified to give them a delicious *Taste*, yet they are apt to yield but small *Fruit*, unless they be extraordinarily assisted.

Now having designed to give my Advice upon all these Differences, that is to say, the Differences of Extent of *Gardens and Grounds*, and the Differences of Explications in them, the Differences of *Soils* and their Situations, the Differences of the several Forms of *Trees*, and of the Stocks on which they are Grafted; as also to give my particular Council and Directions about all sorts of *Fruit*, viz. 1<sup>st</sup>. how to chuse the best: 2<sup>dly</sup>, How among those best, to cull out those only that are most likely to prosper in that particular Form of a *Tree*, in which they must be planted: 3<sup>dly</sup>, How to dispose of each *Tree* in that part of the *Garden*, that is most necessary for it: And 4<sup>thly</sup> and lastly, How to observe a just proportion between the Number of *Trees* of each sort of *Fruit*; I shall pursue this Method,

First, I shall speak of Kernel *Fruits*, beginning first with *Pear-trees*, to shew first, which are those that may succeed best upon *Dwarf-trees*; 2<sup>dly</sup>, Which may be most happily planted in Form of *Standard Trees*: 3<sup>dly</sup>, Which require to be placed against Walls: And 4<sup>thly</sup> and lastly, which are those that give Satisfaction all manner of ways: After which, I will succindly deliver my Judgment as to *Apples*, remarking to you, which I esteem most, and which least, whether to be reard in the form of *Dwarf-trees*, or of *Standards*,

not thinking it worth any ones while, to give themselves the Pains of Planting them in any other Fashion, that is to say, of making *Wall-Fruit* of them.

And when I have given Order how to fill up with *Dwarf-trees* and *Standards*, the middle Space of each Garden, I shall proceed afterward to the most curious part reckon'd in all Gardens, which is that of *Wall-Fruit*, and shall endeavour to shew in what manner I judge any Gentleman may most usefully employ what walling he has, let its Extent in length or height be what it will, and what *Fruits* will best merit place there, and what are unworthy of that choice Station; under which Head, I shall treat not only of *Plumbs* and *Peaches*, but also of *Grapes*, &c. and shall tell what *Fruits* of all those Sorts, delight in such and such certain Expositions, and can hardly endure any other; and which of them, in fine, are of a Temper good enough to agree indifferently with any of them.

When I shall go about to give Counsel about the choice and proportion of *Fruits*, there is one Article, in speaking to which, I shall make great Difference between those curious Gentlemen that aim at the pleasing of their own Palats, only in Planting them, and such as do it only with design to sell their *Fruit*.

The first whom I aim chiefly to gratifie in this Treatise, ought above all things, to seek for, as one may term it, the true intrinsick Merit of each sort of *Fruit*, as discernible by their own Taste, or by that of their Friends, for whose Entertainment they design them.

As for the other, they need to regard little else in them but the Beauty, the Largeness, and the ordinary Fruitfulness and Abundance of them, and to see they be of those ancient Kinds that are most commonly Sold, and go off best; such as the *Orange-pear*, the *Two-headed Pear*, the *dry Martin*, &c. which in those Qualities carry it by many Degrees above the *Thorn-pear*, the *Lechlafferie*, the *Petit-on*, the *Crasane*, &c.

But as to their Cultivation, I make no great Distinction between one and the other (though I would not have this Maxim too rigorously understood) they ought to know, That commonly it is not the great number of *Trees*, which, in proportion to the great Expences they have cost their Masters, bring forth the greatest Quantity of *Fruit*; it is rather a moderate Number, well contriv'd and dispos'd, and well cultivated, that gives the most compleat Satisfaction in all respects.

The Care that is necessary and sufficient enough for the Cultivation of the *Trees* in ordinary *Gardens*, or of the *Plants* in *Kitchen-Gardens*, will go but a little way in producing any happy Effects in greater Undertakings; and we must reduce our selves to midling ones, if we pretend to any very certain success by that kind of Culture; but with this precaution however, that that which is little in respect of such a certain Man, may be great in respect of another, and that on the contrary, that which might be reckon'd too great an Undertaking for such or such a Curious Person that wants those Conveniences some have, may be too small a one to another better furnish'd with Means to carry on the Cultivation of his Grounds.

But, in fine, there is hardly any sort of Work which needs more Prudence in undertaking it, than I wish to every one in this, considering the malignant Disposition there appears in all things that fall under the subject of *Gard'ning*, to decline rather from evil to worse, as one may say, than to improve from good to better; so that we may say with the Ancients, That in this Art we have to do with a formidable Enemy, who is always laying Ambushes against us, or with a merciless Creditor that gives us no respite for the paying him his Debts; or with a furious Adversary that infallibly crushes us to pieces, if we be not strong enough to throw him at the first Shock: Or lastly, with a rapid River, against whose Stream we must be continually tugging up our Boat, with all the force we can of Sails and Oars.

And since 'tis not enough to have rendered you an Account of the Method I think my self obliged to oblige in this Treatise, I think it further expedient clearly to explain to you what my Taste and Judgment is, in all sorts of *Enits*, and first in *Pears*; that after I have declared what pleases or displeases me, as well in those that are eaten Raw, as in those which are not good without Baking or Preserving: No Body may be surprized at the Praises I shall bestow on the one, and the small Account I make of some others; being in that, guided only by the Dictates of my own Palate, though I be confidently perswaded, that they will not be found much differing from those of Persons of Quality.

Therefore I say, That as for *Pears*, I love them in the first place that have a kind of Butter-like and smooth Pulp, or at least tender and delicate, with a sweet sugred and well relish'd Juice; and especially when these Perfections are set off with something of a Perfume; such as are the *Bergamot-pears*, the *Verte-longues* or *Green-longs*, the *Beurrees* or *Butter-pears*, *Lefsbassies*, *Ambres*, *Ruffettes*, *Vireusees*, *Marquies* or *Marchionelles*.

*Melior est culta  
exiguitas, quam  
neglecta magni-  
tudo.*  
i. e. A little  
Ground well til-  
led, is better  
than a great deal  
that lies negle-  
cted. *Palladius.*

Res Agrestis est  
infidissimissima  
cunctanti. Co-  
lumella.  
Imbecillior ager,  
quam Agricola  
esse debet, quon-  
iam cum sit cum  
eo colluctandum,  
si fundus prae-  
valeat, alludit Do-  
minum. Ibid.

Gravem pati-  
tur Tributis cre-  
ditorem, qui A-  
grum colit, cui  
sine spe Absolu-  
tionis astrictus  
est. Palladius.

Non aliter qui  
adverso vix flu-  
mine lembum,  
remigiis subigit.  
Virg. Georg. 1.  
My Taste and  
Judgment in  
Pearls.

*Petit-oin, Winter Thorn pears or Espines de Hyver, St. Germain, Salvatis, Langsci, Crasanes, little Muscats or Musk-pears, Cuisse-Madames, or Lady-Thighs, &c.*

In the second place, for want of the foregoing sorts, I love those that have a Pulp that breaks short in the mouth, with a sweet and sugred Juice, and that sometimes with a little smack of Perfume, such as the *Winter-Boncretien*, gathered out of a good place, the *Robine*, the *Cisselet*, the *Summer Musk Boncretien*, the dry *Martin*, and sometimes even the *Paral*, the *Messire-John*, the *Orange-green-pear*, &c.

In the third place, I truly esteem those that are pretty much perfum'd and well scented; though I do not care this Perfection should be inclosed in a Pulp that is extrem hard, stony and full of dreggy Matter, as the *Amadore*, the *Thick-tail* or *Grosse-gueu*, the *Citron-pear*, and the great *Winter Musk-pear*, &c. For that hardness and stoniness do so much disgust me in all sorts of Pears, that though I passionately love a little Smack of Perfume in any Fruit, yet those two great Faults do in a great Measure ruine the esteem I should have otherwise, for those kind of *Musked-pears* that I have last mentioned.

After having thus expressed what pleases me in raw Pears; it is no very hard matter to guess what may particularly displease me in them; for that doubtless is, first, a Pulp, which, instead of being of a Butter-like, smooth and tender substance, or pleasingly short in the mouth, is doughy, as that of the *Bellissime*, the *Musked Beurree*, the *White Beurree* or *Gravel-pear*, or that of the *Musked Valley-pear*, the most part of the *Doyennes* or *Dean-pears*, &c. Or which is sharp or sour, as that of the ordinary *Valley-pear*, &c. Or that is hard and tough, as that of the *Bernardiere*, of the *Mountain Foundling*, &c. Or full of stony and dreggy Earthy Matter, as that of the *Musked Pernan*, of the *Milet*, &c. Or that is of a wildish Taste, as the *Gilegile*, the *Duch-pears* or *Foss-pears*, and a numerous Train of others, of which I will make a particular Catalogue.

As for Pears to Stew or Bake, I prefer those that are large, that Colour well in the doing, whose Pulp is sweet and somewhat firm, and especially such as keep the longest in Winter, such as are the *Frank-reds*, the *Double-flowers*, and the *Douville*: The *Boncretien* particularly is admirably good prepared any of those ways, only its preparation yields not so pleasing a Colour; and in truth, when there is any Pear among them that is defective, either in Shape or Colour, it ought to be served up only Baked, Stewed, or otherwise Prepared; the *Boncretien-pear*, that has none of those Defects, requiring and well deserving to appear in its natural Beauty, that is, to be served up raw.

Besides these, the *Amadore*, the *Besidy*, and above all, the *Lansic-pear* for Autumn; and generally all the *Winter-pears* that are good raw, as the *Virgoulee*, the *Louise bonne* or good *Louisa*, the dry *Martin*, the *St. Lexin*, &c. are admirable baked, or otherwise prepared by Fire, provided they be done before they be quite ripe, because otherwise their consistence will be too soft and doughy. The *Winter Cereau*, seems to me too small to be kindly produced upon Dwarf-trees; and therefore it would be better to have some *Standard Tree* of it in the *Apple-Orchards*: The *Gatlier* resolves it self too soon into *Marmalade*; the *Catillac*, the *Fon-sarabie*, the *Parmain-pear*, &c. are ended with such a Tartness, that no Sugar can qualify, and the *Pound-pears* and *Love-pears* are so near a-kin to them, that they may almost be reckoned in the same Rank.

To these first Observations I add, That, if in a very good Soil you are confin'd within a Garden of very small Extent, so that having room but for a very inconsiderable Number of Trees, you cannot have so much as one Stock of each, though Choice were made only of the prime Sorts, than in such a Case, it were not amiss, when the Trees would suffer the Experiment, to endeavour to have two excellent sorts of Fruit, of two different Seasons, upon every Stock; as for Example, a *Boncretien* with a *Beurree* or *Buttred pear*; a *Leichafferie* with an *Ambret*; a *Violet-peach* with a *Minion*; a *White Maudlin* with an *Admirable*, &c. And there may be several Reasons to justify the grafting of such a Diversity of Fruits upon the same Tree, provided the Stock be vigorous, and shoots forth promising Branches on both sides; for otherwise the Enterprize would prove successful, because 'tis no purpose to graft upon that side of a Tree that is weak, with any hopes to have any Fruit there, either so good or for so long time, as may be expected from that side which is found and vigorous.

Lastly, I declare my self a sworn Enemy to all affected Multiplicity, and that I am not at all taken with the Pleasure of some that pass for curious Persons, that believe and assert publicly, That those that pretend to have any thing like a Garden, should have in it of every thing something; there being some whose Palate is so far from being delicate, that they brag, for Example, they have two or three hundred Sorts of Pears, which they warrant all to be good, or, at least, not bad. And they affirm, in a manner, as much of the goodness of *Peaches*, *Plumbs*, *Apples*, *Grapes*, &c. of which they also boast to be stored with an incredible Variety.

Such

Such a great number of Fruits does but fright me, as certainly knowing, that what they say, cannot be true of all of them, in respect of Goodness; And, for my part, I cannot find in my Heart with the Curious of that sort, to trouble my self to get for one and the same Season one good Pear and several others but indifferent; how fair soever the later may appear to the Eye: But I much rather chuse to multiply those Sorts which are infallibly good, that I may have, during any one Season, a sufficient force of one sort that is excellent, than to let my Fancy be led away after a compound diversity of Fruits, which may be perhaps agreeable to the Sight; but are assuredly disgusting to the Taste; or, at best, qualified with a very indifferent degree of Goodness; or, to speak plainer, with a little Goodness accompanied with several great Defects.

I know that nothing is more pleasing in a Company that are Curious, and Passionate Admirers of good Fruits, than to be able to furnish them with several Sorts at the same Time, when they are good enough to please the most Delicate Persons among them, to judge which is most Excellent; as it may happen in the Months of July and August, for *Summer-Fruit*; and of October, November and December, for those of Autumn and Winter: But in my Judgment, nothing is more unbecoming or beneath any Person of Quality that is Curious in such Rarities, than to desire to have an Abundance of all sorts of Fruits, without regard to any other Excellence, but what will merely qualify them to make a fine show in the Variety from which results the so much praised Beauty of certain Pyramids; What is to be thought of thus Pyramids, and how they are to be order'd. In this and the two next Paragraphs.

Upon which occasion, I shall by the by tell you, That in the Houses of Great Persons, where such sorts of Pyramids are in use, and are by Custom become in a manner necessary, particular care should be taken to have spacious Gardens, that will afford room to plant Trees enough to furnish wherewithal to compose so many as occasion shall require, that may consist all of such sorts of Fruits, as are both beautiful to the Eye, and excelling in Goodness: Which perhaps will not be over difficult to effect.

But for middling Gardens, we ought only to be Ambitious to have Magazines of Fruits that are really good and delicious, and not of such as serve only for Ornament and Shew: And perhaps, if a sufficient abundance of such fair and good Fruits could be attained, I would be bold to maintain, that Pyramids compos'd only of them, as they would be really much more valuable than those others, though beautified with less Variety of Colours, Shapes and Kinds of Fruits, so would they be better accepted, and more highly esteem'd. At least, without pretending to go about utterly to decry the Mode of using that other sort of Pyramids, which plead a kind of Preference for appearing at great Tables, if they must be used, I would have them always accompanied with a pretty Basket well fill'd with the choice eating Fruits of the Season, all fair and goodly, and all perfectly ripe; which in the Courts of Kings and Princes, is called the *Hors-d'oeuvre*, or the *Out-work*; and, as the Honour of a Pyramid, is to come off always whole and entire, without suffering the least breach or rule, neither in its Construction, nor in its Symmetry; so I pretend, that on the contrary, the Honour of the Basket consists in returning always empty, without bringing back any thing its Errand was to present.

I will not here dispute whether it be Expedient to Plant any Dwarf-trees in little Gardens, because no Body questions it, and especially in those of a large Extent, and that are spacious enough to contain all manner of Trees, neither will I move any doubt, whether there should be any placed in very small Gardens, because that is a thing that depends of the Inclination of the Masters of them, which are at their own Liberty to order them as they please.

But supposing them to have already taken up a Resolution to Plant some such Trees in them, but are at some loss, what sort of Fruits they had best to fix upon for that purpose; I can very well discuss this latter Question, and give them my Opinion of what kind of Fruit it would be most for their purpose to make choice of for a Dwarf-tree to Plant in such a little Garden; as namely, whether a Pear-tree or an Apple tree, a Plum-tree or a Peach-tree, a Fig-tree or a Cherry-tree, &c.

In which Point my Decision should presently be, That all those sorts of Trees that bear not easily, or that produce not Fruit of sufficient Goodness, should be excluded out of all very little Gardens; and consequently, that no Cherry-trees or Apple-trees upon Free-stocks should enter into them; but as to the Apple-tree on the Paradoxe or Sweet-Apple-tree Stocks, the Case alters, because they produce such small Tops, that one may well enough

What is to be thought of thus Pyramids, and how they are to be order'd. In this and the two next Paragraphs.

Whether it be fit to Plant any Dwarf-trees in little Gardens.

What Sorts of Dwarf-fruit-trees are fittest to be Planted in little Gardens. And first, what Trees not proper, and why?

*Petit-oins*, *Winter Thorn pears* or *Espines de Hyver*, *St. Germain's*, *Salvatis*, *Lanfac's*, *Craſanes*, little *Mufcats* or *Musk-pears*, *Cuisse-Madames*, or *Lady-Thighs*, &c.

In the second place, for want of the foregoing sorts, I love those that have a Pulp that breaks short in the mouth, with a Sweet and sugred Juice, and that sometimes with a little smack of Perfume, such as the *Winter-Boncretien*, gathered out of a good place, the *Robins*, the *Casselet*, the *Summer Musk Boncretien*, the dry *Martin*, and sometimes even the *Portal*, the *Messire-John*, the *Orange-green-pear*, &c.

In the third place, I truly esteem those that are pretty much perfum'd and well scented; though I do not care this Perfection should be inclosed in a Pulp that is stream hard, stony and full of dreggy Matter, as the *Amadore*, the *Thick-tail* or *Grosse-guenie*, the *Ciuran-pear*, and the great *Winter Musk-pear*, &c. For that hardness and stoniness do so much disgust me in all sorts of *Pears*, that though I passionately love a little Smack of Perfume in any *Fruit*, yet those two great Faults do in a great Measure ruine the esteem I should have otherwise, for those kind of *Musk-pears* that I have last mentioned.

After having thus exprest what pleases me in raw *Pears*; it is no very hard matter to guess what may particularly displease me in them; for that doubtless is, first, a Pulp, which, instead of being of a Butter-like, smooth and tender substance, or pleasingly short in the mouth, is doughy, as that of the *Bellissime*, the *Musked Beurree*, the *White Beurree* or *Gravel-pear*, or that of the *Musked Valley-pear*, the most part of the *Dymees* or *Dean-pears*, &c. Or which is sharp or sour, as that of the ordinary *Valley-pear*, &c. Or that is hard and tough, as that of the *Bernardiere*, of the *Mountain Foundling*, &c. Or full of stony and dreggy Earthy Matter, as that of the *Musked Pernan*, of the *Milet*, &c. Or that is of a wildish Taste, as the *Gilegile*, the *Dutch-pears* or *Fosse-pears*, and a numerous Train of others, of which I will make a particular Catalogue.

As for *Pears* to Stew or Bake, I prefer those that are large, that Colour well in the doing, whose Pulp is sweet and somewhat firm, and especially such as keep the longest in Winter, such as are the *Frank-reds*, the *Double-flowers*, and the *Dorvilles*: The *Boncretien* particularly is admirably good prepared any of those ways, only its preparation yields not so pleasing a Colour; and in truth, when there is any *Pear* among them that is defective, either in Shape or Colour, it ought to be served up only Baked, Stewed, or otherwise Prepared; the *Boncretien-pear*, that has none of those Defects, requiring and well deserving to appear in its natural Beauty, that is, to be served up raw.

Besides these, the *Amadore*, the *Besidery*, and above all, the *Lanfac-pear* for Autumn; and generally all the *Winter-pears* that are good raw, as the *Virgoulee*, the *Louisse-bonne* or good *Louisa*, the dry *Martin*, the *St. Lezin*, &c. are admirable baked, or otherwise prepared by Fire, provided they be done before they be quite ripe, because otherwise their consistence will be too soft and doughy. The *Winter Corcean*, seems to me too small to be kindly produced upon *Dwarf-trees*, and therefore it would be better to have some *Standard Tree* of it in the *Apple-Orchard*: The *Gatelier* resolves it self too soon into *Marmalade*; the *Catillac*, the *Fenstarabie*, the *Parmain-pear*, &c. are endued with such a Tartness, that no Sugar can qualifie, and the *Pomid-pears* and *Love-pears* are so near a-kin to them, that they may almost be reckoned in the same Rank.

To these first Observations I add, That, in a very good Soil you are confin'd within a Garden of very small Extent, so that having room but for a very inconsiderable Number of *Trees*, you cannot have so much as one Stock of each, though Choice were made only of the prime Sorts, than in such a Case, it were not amiss, when the *Trees* would suffer the Experiment, to endeavour to have two excellent sorts of *Fruit*, of two different Seasons, upon every Stock; as for Example, a *Boncretien* with a *Beurree* or *Burred-pear*; a *Leschafferie* with an *Ambret*; a *Violet-pear* with a *Minion*; a *White Maudlin* with an *Admirable*, &c. And there may be several Reasons to justify the grafting of such a Diversity of *Fruits* upon the same *Tree*, provided the Stock be vigorous, and shoots forth promising Branches on both sides; for otherwise the Enterprize would prove successful, because 'tis to no purpose to graft upon that side of a *Tree* that is weak, with any hopes to have any *Fruit* there, either so good or for so long time, as may be expected from that side which is sound and vigorous.

Lastly, I declare my self a sworn Enemy to all affected Multiplicity, and that I am not at all taken with the Pleasure of some that pass for curious Persons, that believe and assert publicly, That those that pretend to have any thing like a *Garden*, should have in it of every thing something; there being some whose Palate is so far from being delicate, that they brag, for Example, they have two or three hundred Sorts of *Pears*, which they warrant all to be good, or, at least, not bad. And they affirm, in a manner, as much of the goodness of *Peaches*, *Plumbs*, *Apples*, *Grapes*, &c. of which they also boast to be stored with an incredible Variety.

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Upon which occasion, I shall by the by tell you, That in the Houses of Great Persons, where such sorts of *Pyramids* are in use, and are by Custom become in a manner necessary, particular care should be taken to have spacious *Gardens*, that will afford room to plant *Trees* enough to furnish wherewithal to compose so many as occasion shall require, that may consist all of such sorts of *Fruits*, as are both beautiful to the Eye, and excelling in Goodness: Which perhaps will not be over difficult to effect.

But for minding *Gardens*, we ought only to be Ambitious to have Magazines of *Fruits* that are really good and delicious, and not of such as serve only for Ornament and Shew: And perhaps, if a sufficient abundance of such fair and good *Fruits* could be attained, I would be bold to maintain, that *Pyramids* compos'd only of them, as they would be really much more valuable than those others, though beautified with less Variety of Colours, Shapes and Kinds of *Fruits*, so would they be better accepted, and more highly esteem'd. At least, without pretending to go about utterly to decry the Mode of using that other sort of *Pyramids*, which plead a kind of Prescription for appearing at great Tables, if they must be used, I would have them always accompanied with a pretty Basket well fill'd with the choice eating *Fruits* of the Season, all fair and goodly, and all perfectly ripe; which in the Courts of Kings and Princes, is called the *Hors-d'oeuvre*, or the *Out-work*; and, as the Honour of a *Pyramid*, is to come off always whole and entire, without suffering the least breach or ruffle, neither in its Construction, nor in its Symmetry; so I pretend, that on the contrary, the Honour of the Basket consists in returning always empty, without bringing back any thing its Errand was to present.

I will not here dispute whether it be Expedient to Plant any *Dwarf-trees* in little Gardens, because no Body questions it, and especially in those of a large Extent, and that are spacious enough to contain all manner of *Trees*, neither will I move any doubt, whether there should be any placed in very small Gardens, because that is a thing that depends of the Inclination of the Masters of them, which are at their own Liberty to order them as they please.

But supposing them to have already taken up a Resolution to Plant some such *Trees* in them, but are at some loss, what sort of *Fruits* they had best to fix upon for that purpose; I can very well discuss this latter Question, and give them my Opinion of what kind of *Fruit* it would be most for their purpose to make choice of for a *Dwarf-tree* to Plant in such a little Garden; as namely, whether a *Pear-tree* or an *Apple-tree*, a *Plum-tree* or a *Peach-tree*, a *Fig-tree* or a *Cherry-tree*, &c.

In which Point my Decision should presently be, That all those sorts of *Trees* that bear not easily, or that produce not *Fruit* of sufficient Goodness, should be excluded out of all very little Gardens; and consequently, that no *Cherry-trees* or *Apple-trees* upon *Free-stocks* should enter into them; but as to the *Apple-tree* on the *Paradise* or *Sweet-Apple-tree* Stocks, the Case alters, because they produce such small Tops, that one may well enough

What is to be thought of *Fruit Pyramids*, and how they are to be order'd. In this and the two next Paragraphs.

Whether it be fit to Plant any little Gardens.

What Sorts of *Dwarf-fruit-trees* are fittest to be Planted in little Gardens. And first, what *Trees* not proper, and why?

nough admit a small number of them into a little Garden, without incurring it in the least.

The *Peach-tree* might well pretend a place there, for the Excellency of its good *Fruit*; but the Objections against it are, That in a few Years it grows too high, and spreads into a very ill-favour'd Top, and is too apt to shed its Flowers, to give any hopes of contenting its Owner. Besides that, it is but too true, That excepting in some few City-Gardens, that are sheltered from the North Wind by lofty Buildings, or very high Walls. *Peach-trees* can hardly thrive any where in the form of *Dwarf-trees*, and therefore must be let alone, only for the hot Countries, where they prosper wonderfully in the Vine-yards.

The *Plum-trees* of those Sorts that we esteem most, are also liable to the Inconvenience of growing too high, or of bearing very late, and very uncertainly; and for that Reason, are to be excluded those little Gardens of which we are treating.

The same is to be said of the *Fig-tree*, which besides those other Inconveniences, requires too much Attendance for the well covering it, for want of which it will be in great danger of perishing.

In fine, among them all, our only Choice must fall upon the *Pear-tree*, for which I most incline; because, if it be well ordered, its top or spreading cannot well grow monstrous enough to be any Nuisance; but, on the contrary, may be agreeable, and give pleasure all the Year long, either by its Earliness, Plenty and considerable Goodness of its *Fruit*, or by its round, open and well ordered Figure, which lasts in all Seasons. Next then, we are to see of what sort that one *Pear* must be, that is to be planted in a Garden where the Master would have but one, or where there is no Room for any more; then of what Kind the second must be, where there is Room for it; and thence we shall go on in order, to examine of what respective sorts must be all the rest, that are fittest to be Planted in every one of the other Gardens, of the several Bignesses to be proposed, determining at the same time, which are to be Grafted on *Free-stocks*, and which on *Quince-stocks*.

But I shall do nothing of all this, without first supposing every one of the Gardens I shall treat of to be enclosed with some sort of Wall, and consequently in a condition to receive some *Wall-Fruit-trees*, from which they may promise themselves at least with so much the greater certainty, the pleasure of having some good *Summer* and *Autumn Fruits*; for I hardly reckon them for Gardens that have not the Advantage to be enclosed with Walls, although it were for nothing else but to secure them from the injurious Blasts of the Cold Winds.

And supposing further, That here we are to treat of a little Garden, qualified with all the Conditions necessary, in regard of its *Soil*, and which we have above explained.

And lastly, supposing, That for little Gardens, the aim of a true and well guided Curiosity, is rather to raise *Fruit* that may be fair and good, than purely to endeavour to have it early and hastily, without any Consideration of its Quality. For to Gentlemen, that are of this last Humour, I would not give Counsel to Plant any *Tree* of our best Kinds, but to them I would offer other Advices, which, being such as I dislike myself, would by Consequence not be over good to follow; and that would be, for Example, to Plant nothing but *Orange-green*, *White Butter*, *Doyenne* or *Bisider* *Pear-trees*, because those kind of *Trees* will assuredly yield *Fruit* much sooner than the choicer Sorts; or, if they would have really good *Fruit*, but care not much whether they be of those beautiful Sorts of *Trees* that content the Eye at all Seasons, as well by the Regularity of their Disposition, as the Beauty of their Shape, then I would Counsel them, after they have chosen some of those better Sorts, to Plant them indifferently, just as they come out of the Nurseries, that is, with the most part of their Branches on, and yet with but few Roots, that being ordinarily a means sure enough both to have *Fruit* quickly, and to have it good. But withal, it is as certain a way to have it but finally, to have but a little of it upon each *Tree*, and to have the *Trees* bear but a very little while, and to have them always grow in a ruffick and miserable Shape; to which, I add, That by such an indifferet greediness, and over-hasty Method, they very often fall into the same Inconvenience with *Esop's* Dog, who lost all by snatching after too much.

I confess ingenuously, That I have a very particular Aversion for ill favoured *Trees*, and consequently for all those hasty Proceedings, that infallibly cause them to be such. And especially in a Garden that we would have agreeable for the goodness of its *Trees*, as well in *Winter*, when they are quite bare and strip, as in *Summer* and *Autumn*, when they are set out with their best Ornaments of Leaves and Fruits. For in such a Garden, I should not willingly consent to plant none but such *Trees*, as either yield *Fruit* soon indeed,

The *Pear-tree* of all the most proper to be Planted in little Gardens, and why.

What the Author advises to Gentlemen over hasty for *Fruit*, with the Inconveniences following it.

indeed, but good for nothing, or of those others, that being first Planted in a wild ugly Figure, can never come to be fair or pleasing to the Sight.

I very well know, That generally speaking, the Intention of all Planters is not only to have *Fruits*, but to have some speedily; and they have reason; for I am so far of their Mind, that I could wish, that in this respect the Order of Nature would accommodate itself to our Desires, so as to give us *Fruit* upon *Trees* that are Cut and Trimm'd, much sooner than she does, and particularly such as are both fair and good: But alas! the Secret never yet could be found, to make her in any considerable degree to advance her ordinary Pace, without spoiling all; and therefore, though the Skill of the Gard'ner may in that case be of extraordinary Assistance, yet, after all, our best way is to be content to allow that wise Mother the time she takes of Four, Five or Six Years, for the Production of *Kernel-fruits*, which she performs on some *Trees* sooner, and on some latter; and to comfort our selves with the Consideration of the Assurance we have, That, *First*, in the Sequel she will amply recompense us for the Scarcity of those preceding Years; and, *Secondly*, That to give us *Stone-fruit*, and *Figs*, and *Grapes*, she commonly requires less Time: For that, in effect, a Plantation of handom and well ordered *Trees* of this latter Sort, seldom makes us stay above Three or Four Years without pleasuring us with a considerable Quantity of *Fruit*, to while us with in Expectation of a full crop in the Fifth or Sixth Years, and many Years after.

But in Case the ordinary Time of staying for *Kernel-fruit* seem too long, and the Party be a Person of Quality accommodated with great Gardens (for what I am going to Advise is not practicable in little ones) then I would willingly consent, That in some by-place remote from the Principal Garden, he should venture the Sacrificing of a good Number of *Pear-trees* of the best Sorts of every Season, Planting them whole and rough, as we have before hinted, and at small distances one from the other, as in Nursery-Gardens, that is to say, about Two or Three Feet one from the other: For, being so ordered and well look'd after, they will pretty soon yield some good *Fruit*, and tolerably fair too, which will be at the least some beginning of Consolation, till such time as the fine Garden shall be arrived to Perfection enough to play its part. I followed this Expedient in the Kitchen Garden at Versailles, as well for certain *Fruits* which in cold and moist *Soils* thrive not over well in the Form of *Dwarf-trees*, as particularly for some new Kinds, whose new Names rendering them unknown to me, fired my Curiosity with the greater Impatience to see the *Fruits* of them, in which I succeeded very well, as I did also in the joint Intention I had to arrive speedily to some competent Abundance, and to raise by this means some Tall *Standard-trees*, both lasting and fair, of which I foresaw I should have need. However it is to be expected, that if such *Trees* be kept too long in that manner, they will run great danger either of Dying, or at least of infallibly becoming unfit to be removed to other Plantations: Therefore it is for such Curious Persons as are very Rich and Able, and that Plant spacious Gardens, to consult their own Inclinations upon the Point, and accordingly to resolve whether they will please to be at a little the greater Expence, to attain by that means the Satisfaction to taste *Fruit* so much the sooner, or otherwise to have the Patience to stay somewhat longer for a Crop, with assurance to have it with less Charge and much fairer, and in greater Abundance.

And though I have great reason to fear, the Preface of this Third Part, as Necessary as it is, may already have seem'd too long and tedious to new Beginners in these Curiosities, who without doubt demand nothing more here but to know in all haste which are those choice Kinds of *Trees* they are to furnish their Gardens with: Yet, by their leave, I must needs add Three Things more, before I can proceed to what will satisfy them.

*First*, I am to establish it for a certain Rule, That in all those Parts of Europe where the Cold and Heat are neither too long nor too violent, Nature having engaged her self, as I may say, in some manner, to give us certain Kinds of *Fruits* in some particular Months of the Year, it therefore constantly happens of Course, that those Kinds of *Fruits* do once in the Year without fail come to Maturity there: But withal, I must tell you, That it is no less certain that this happens sooner in some Places, and latter in others, that difference happening from the different measure of Heat that predominates in each place. Thus in the hotter Climates, the *Fruits* of each Season ripen sooner than in the colder; and what is more, some *Fruits*, and particularly some Sorts of *Figs*, *Peaches* and *Grapes* ripen sooner in the former than in the latter, which can never ripen at all in cold Regions. Which is the Reason why *Italy*, *Provence*, *Languedoc* and *Guyenne*, not only see those *Fruits* ripen in June and July, which we on the hither side of the *Loire*, see not arrive to Maturity before the Months of August and September, but besides have the peculiar Advantage to see some Sorts of

White Method may be taken in spacious Gardens to have *Fruit* both soon and fair, while their principal Garden is growing to Perfection.

The Effects of the Difference of Climate.

of Fruits ripen with them, which for want of sufficient heat, never turn to Account in the Neighbourhood of the North. But then again, as it is true, That in those Southern Provinces, all their *Autumn* and *Winter* Fruits are almost past, when ours hardly yet begin to ripen; so to be even with them, we are often in the Prime and Height of our Crops, in the time when they have nothing at all left.

We see almost the same Difference happen in one and the same Climate, by reason of the Different Tempers of Soils and of Years, which, according as they are favoured with a greater or lesser proportion of Heat, make the Fruits growing in them to be the more or less early. To give you an Example of this Effect in hot Soils, it is observed, That the Soil of *Paris* has ordinarily the Start of above Fifteen Days before that of *Versailles*; and for hot Years, that of 1688 was known to ripen us in the Month of *August* those Sorts of *Peaches* and *Muscats*, that in the Years 1686 and 1687 came not to Maturity till after the middle of *September*.

Which supposes the same Difference as to the early or backward Maturity of all the other Fruits of each Fruit Month in the Year: Generally *May*, *June* and *July* are the Months that decide the Destiny of each sort of Fruit for the time of their Maturity: And Curious Gentlemen that are Skillful, are to take their Measures well upon that Foot, so as not to let their *Autumn* and *Winter*-Fruits hang too long on the Trees in hot Years, nor to let themselves be surprized by the ripeness of them, which ought not fully to come to those Fruits till some time after they are gathered and laid up. For 'tis certain there rots a great many of them after they are laid up, for want of being timely gathered; to prevent at least some part of which Mischiefs, I shall elsewhere prescribe some Remedies.

The Maturity of *Muscats*-Grapes which grow in a good Soil, and in a good Exposition, ought, in my Opinion, serve for a great Rule in two principal Articles concerning Fruits; the first is, To know what Fruits may ripen, or not ripen in every Garden in the Months of *September* and *October*; for it is most certain that where-ever the *Muscats* ripens, there all the Fruits of the latter Season will ripen too, and reciprocally again on the other side, where-ever that ripens not, there the most part of those other Fruits will not ripen neither.

The Second Article or Point, for which the *Muscats* may serve for a Rule, is, for the knowing whether those Fruits of the latter Season shall comparatively ripen soon or late; for it is a most certain Mark, That in what Gardens soever, where the *Muscats* ripen soon, that is to say, about the End of *August*, or the Beginning of *September*, there the Year is forward; and, on the other side, if they ripen late, that is, towards the first of *October*, it is as sure a sign, that the Year is backward: So that, in Truth, I have found I might as securely govern my self by this Rule, as any Mariner by his Compass.

The second Thing I have to add, is, That we are to reckon Four distinct Seasons of Fruits; namely, 1<sup>st</sup>, The Summer Season, which begins in *June*, and finishes at the beginning of *September*. 2<sup>dy</sup>, The Vacation Season, or first *Autumn*, all which comprehends the first part of *Autumn*, and ends at *Martelmas*, or the beginning of *November*. The 3<sup>d</sup>, which begins where the last ends, and holds till about *Christmas*, comprehending the latter part of *Autumn*, and may be called the second *Autumnal* Season. And the 4<sup>th</sup>, and last is that of *Winter*, which beginning in *January*, holds on till the appearance of the Red Fruits of the Month of *April*.

Thus, after having done with first and second Things I had to propose, as I promised in the Project of this Part, I am in the third place to specify to you, which are the principal Kinds of Fruit, not only of every of those Seasons, but of each particular Month of which they are composed: So that our Description will be like a little Land-skip in which may be seen, with one cast of an Eye, the whole Abridgment of all that can give Pleasure in Matter of Gardening; and by that means, without any further Discussion, we may be able perhaps of our own Heads, to determine what Choice to make of those Kinds which we fancy best.

Therefore I shall run through all the Months in Particular, the more precisely to describe to you what Fruits each of them claims to its share, without omitting to mention so much as those, that because they grow not on Trees, such as are *Strawberries*, *Raspberries*, *Gosberries*, *Curants*, *Musk Melons*, *Grapes*, &c. are not within the compass of our present Project. But I shall speak of them not in the Order commonly used in the World, but according to that of the successive Maturity of their Fruits.

And accordingly, *Summer* shall be the first part of the Year with which I shall begin; it being most true, That the *Summer* Season is the first that can be said any thing richly to entertain us with the new Productions of the Earth: And I dare affirm, That, in matter of Fruits, we may look upon that Season as a kind of annual and fleeting Republic, which

As also of the Difference of Soils, and Tempers of Years, in the same Climate

Autumn and Winter-fruits not to hang too long on the Trees.

The Ripening of Muscat-Grapes a certain Rule to know the temper of the Year and Soil, and the Ripeness of other Fruits by.

Four several Seasons of Fruits, and how reckoned.

Of the Summer Season.

which from very small beginnings at first, rises in a very little time to a very considerable power, which yet is not of long continuance, because no sooner is it establish'd in its full Glory, but it begins to flag, and tend towards that Decay which soon after it sinks into; though indeed it be not such a Decay that brings with it an entire Destruction, but only like a kind of *Inter-regnum* or Vacancy of Government, which is a Revolution it must suffer for some Months, which being past over, its Destiny will make it reassume its former flourishing Estate, and the same Vicissitudes in which we have before seen it, and through which, as I have said above, it passes constantly once every Year.

In discoursing of which, you are above all Things to take notice, That it will be chiefly with respect to our own Climate, that I shall enter upon the particularities and upon the Discussion of the several Sorts of Fruits each Season. Accordingly to begin with the Fruits of the Month of *June*, I say, and few People there are but know, that *Strawberries* that begin to Ripen at the End of *May*, begin to be in great Plenty at the Entrance of *June*; and I add, that they are followed hard at the heels by the forward *Cherries* raised upon *Wall trees* well plac'd, and that before the End of the same Month, *Curants*, *Gosberries*, *Raspberries*, *Guignes* and *Hasting-Cherries*, and *Griots* too begin to fill the Markets; and, in fine, that the bedded *Muskmelons*, the forward *Apricocks*, and some little *Muscats* upon *Wall-trees*, endeavour to shew us by some little Samplers, the Riches which they altogether promise us in greater Abundance in the Month next immediately ensuing.

That is to say, in the Month of *July*, commonly, and not without Reason, called the month of Red Fruits; For accordingly, till the Fifteenth or Twentieth Day of it, there continues to be a great Plenty of all the Kinds of that Fruit which were beginning to come in during the preceding Month; and when they draw to an end, the backward *Cherries* or *Bigarros* fail not to succeed them, and to perform their Duty; during which Opportunity, the Industry of Discreet and Skillful Persons that have the Care of them, by the help of Sugar which is at their Command, makes a most admirable use of all sorts of Red Fruit under different Figures.

And here I shall not forget to tell you, That *Muskmelons* are, without Contradiction, the Principal of all the Fruits of the Season; and that besides, provided that in well qualified Soils, some *Wall Fig-trees* be intermixed between the Boxes of the former, we may see those *Muskmelons* accompanied with a great Abundance of *Figs*; at the same time may be expected Plenty of forward *Peaches*, of *Yellow Plums*, of little *Muscats* and ordinary *Apricocks*, whilst the *Dwarf-trees* and *Tall-trees* or *Standards* shall strive with a seeming Emulation which shall present us with the greatest Numbers of *Pears*, called *Cuisse-Madams* or *Lady-rhigbs*, of *Maudlin-Pears*, of the three Sorts of *Blanquets*, of *hasty Russetts*, of *Bourbons*, *Muskat-Roberts*, *Skinless pears*, and of many others of lesser Quality; and consequently, that we have a great deal of Reason to be very well satisfied with this Month of *July*.

When we are once in *August*, we are arrived, as I may say, to the great Magazin of an infinite number of good Fruits. For in the beginning of this Month there continues still as great a Plenty as can be desired, both of *Figs* and backward *Cherries*, of *Bigarros* and *Apricocks*, as well on *Wall-trees* as on *Standards*; and by way of Surplusage still to so many Blessings, the unbedded *Muskmelons* begin to furnish our Tables, and to bear Company with the bedded ones which last to the End of the Month. Besides all which, towards the End of the same Month, we begin to have *Pears* of the following Sorts, viz. *Robines*, *Summer musked Boncretiens*, *Casselets*, *Espagnes* or *Reveree-pears*, *Fondants de Brest*, or melting *Pears* of *Brest*, *Russetts*, &c. And above all, this is the illustrious and happy Month for the Fruits that charm me most, that is to say, for certain *Plums*, which when in our Climates they have the good Fortune to be raised upon *Wall trees*, may dispute the Prize of Excellence with most Fruits of the Season, or at least may claim an equal place in our Esteem with the most Famed and Accomplished of them all. Those *Plums* are the two Sorts of *Perdrigons*, white and violet; the *Prune Royal*, the Cloath of Gold *Plum*, the *Apricock Plum*, the *St. Catharine*, the *Diapred Violate*, the *Rouche Courbon*, the *Queen Claude*, &c. together with those that thrive well enough upon *Dwarf-trees* and *Standards*, that is to say, not only the most part of those already named, but likewise all those that bear the Title of *Damask*, and are of Five or Six Fashions very different one from another, either in Bigness, Colour, Figure, or more or less early Maturity; there being of them the White, Black, Red, Violet, Grey, &c.

I shall tell you by the by, That the grey *Damask* appears to me to be one of the principal Sorts; besides which the *Mangerous*, the *Mirabelles* and the *Imperials*, &c. thrive at this time which shall do best, and imitate the *Wall-trees* which now yield the

rest of their Crop of *Apricocks* and *Peaches* of *Troy*, *Rossanne*, *Alberge* and *Cherry Peaches*, &c. And the *Wall-trees* begin also to give us some *Mauldin*, *Mignon* and *Bowdin Peaches*, which are sometimes accompanied with the *Muscat*, and forward or hasty *Grapes*, as well black as white; and therefore none can dispute but that this Month of *August* is furnished with wherewithal to satisfy the most insatiable, nice and difficult Curiosity 'tis possible to have.

But yet how Rich soever the foregoing Month has appear'd, I may for all that without scruple say, That this of *September* is nothing inferior to it; for what almost does it not produce in our Climates? It is the true Month for good *Peaches*, there being every where such an extream Abundance of them, that they are served up in no lesser Quantities than by great Pyramids at every Meal. The white and red *Mauldins*, and the *Minions* which began only to come in Season in the precedent Month, are so far from being exhaulted now, that 'tis particularly at this time they are in greatest plenty, and are followed by a great number of other Sorts of *Peaches*, all very Excellent, and every one Ripening regularly, according to the Order of Maturity that Nature has establish'd among them, and that, without doubt, with a particular intent they should be able to furnish with a sufficient and successive store, all the parts of the whole Month; and this is their Order, the *Bowdins* begin, the *Cherrieuses* or *Goat-peaches* follow next after them, and immediately precede the hasty *Violets*; then come the *Persicks*, and then the *Bellegardes* and white *Andilli's*, and lastly the *Admirables*, the *Brugnons* or *Nectarines*, and the purple *Peaches*; a Number great enough one would think to content us so, as not to leave us any Stomack to desire any more in this Season; and yet that is not all, for this Month of *September* yields us besides abundance of *Grapes*, of *Chasselas*, of *Corinths* of three Colours, of *Crotats*, of *Morocco Grapes*, and several other Sorts of good *Grapes*, and particularly a great Plenty of *Muscats*, which of what Colour soever they be, whether white, or red, or black, (provided they have all the Excellencies that belong to them, that is to say, the firmness, perfumed Scent and true Taste they should have) are by the Confession of all the World, far better worth than all other *Grapes*: Neither is this Month inclined to end without giving us a beginning of lateward *Plums*, such as are the *Empresses*, the black *Damasks*, the little *Perdrigons*, the backward *Perdrigons*, &c. And it is so much in the humour of Liberality, that it begins a fresh to return us with a great quantity of second *Figs*, as well on *Wall-trees*, as in *Boxes*, and on *Dwarf-trees*; and, as an Addition to this abundance, it lets us drop some *Butter-pears* and *Bergamots*, &c. which it ravishes us to see when the Stone-fruits are going away. In a word, it seems, as if the Deluge or full Tide of good Fruits happened in this Month, which in effect, if it produced much less than it does, would still be extream Rich, and luxuriantly Plentiful.

Fruits in Office.

The Month of *October* indeed possesses not so great a number of Stone-fruits as its Predecessor, but yet for all that, it is not ill furnished with them; for all the admirable and purple *Peaches*, nor the *Figs* neither were not consumed in *September*, there often remaining a sufficient Quantity of them in this Month: Besides which, its Fertility extends much further, as being in a Condition to make us great Largesses of *Nivette-peaches*, yellow late, and violet late *Peaches*, and yellow *Lices*, or smooth *Peaches*, all Excellent *Peaches* for the latter Season; and even in our Climate, the great red *Pavie* or ballard *Peaches* of *Catillac* and of *Rambouillet*, with the yellow *Pavies* that make so much noise in the Vineyards of hot Countries; I say those *Pavies*, when in our Gardens they happen to grow in a good Place, that is to say, where they are well Nourished and Exposed to a good Sun, certainly make a very good Figure at this Time, and especially the yellow *Pavie* which I have found of an admirable Taste in its Season. But though we had none of these *Peaches* nor of these *Pavies*, should we not be rich enough in having still on one side, abundance of good *Grapes* to gather always upon the Vines, as the ordinary *Muscat*, the long *Muscat* otherwise called *Passe musked*, the great Royal black *Grape*; nor to mention the *Gemmetin-grapes*, the *Chasselas*, the *Expirants*, the *Green Grapes*, the *Malmsey* and the *Corinthian Grapes*, &c. And on the other, in having a vast Quantity of most exquisite *Pears*, as the grey *Butter-pears*, the *Bergamots*, the green *Sugar-pears*, the floury *Muscats*, the long green *Pears* or *Verte-longues*, the *Crasannes*, the *Marchionesses* or *Marquises*, the *Petit-ains*, &c. And is it not very certain, That one only sort of all these, or, at most, Two or Three of them might be sufficient not only to supply our Necessities, but even amply to humour the Pleasure of the most Curious?

Fruits in November.

The Reign of those Fruits which acquire not their Excellence till after they are Gathered, fails not to begin at the same time when that of Fruits that attain their full Ripeness on the Trees, expire; that is to say, particularly the Reign of Stone-fruits, whose Destiny ordinarily terminates about the end of *October*. But this is our Comfort, That

That we shall not yet this pretty while perceive any sensible diminution of Fruits, there remaining for a part of *November* many of those that we saw signalize themselves towards the end of the foregoing Month; besides which, good *Grapes* will also last a good while, if care has been taken to gather them before the Frosts, and to keep them carefully in the Fruit-lofts: For, being so ordered, they have as great a Privilege as any to appear at Noble Tables, though they be a little thriveled; it being not to be denied, but that they are always very good so long as they continue untainted with any speck of Rottenness. The long *Muscat Grape* is that whereof I most particularly speak here, it having the Gift to please the greatest King in the World: And I that have the Honour to be the Director and chief Manager of his Fruit and Kitchen-Gardens, what ought I not to do, and indeed what do I leave unattempted for the finding out all means imaginable to furnish him with that darling Fruit for several Months together?

Besides these, the *Chasselas-Grapes* both white and black, want not Patrons that highly praise them; for they have the advantage both to ripen and to keep much more easily than the *Muscats*. And because, in Truth, they can hardly have the confidence to appear at the same Table with the *Muscats*, they wait till they are passed to triumph in their turn; and so these two Sorts of *Grapes* both do honour to the Month of *November*, that is to say, the *Muscats* in the beginning, and the *Chasselas* at the end; these latter lasting the most part of the *Advent-Season*. I add, That this Month is still Opulent and well stored with Miraculous *Pears*. For the Fruit-loft, if well stock'd, supplies it with a good part of those that were so much in Fame at the end of *October*, it being accommodated with considerable remains of *Bergamots*, *Crasannes*, *Marquises* or *Marchionesses*, *Lansacs*, *Petit-ains*, &c. And besides, this Month is the Master and Dispenser of very many other good *Pears*; for there are some that begin to mellow in its time, and that is in Favour of those whose Gardens are in a hot and dry Soil, or that have *Wall-trees* and *Standards*, the same *Pears* otherwise staying longer to contribute to the good Fortune of *December* and *January*, for their Commodity whose Gardens are in a little more fatill and coldish Soil: And these kinds of *Pears* are, the *Espino* or *Thorn-pear*, the *Lechasseuses*, *Ambrets*, *St. Germain's*, *Pastorelli's*, *St. Augustin's*, *Virgouleuses*, &c. And for those Persons too that love *Pears* that break short in the Mouth, and such as are musk'd, this Month of *November* presents them with *Spanish Boncreiens*, *Amadots*, dry *Martins*, Winter *Russelets*, which are all tolerably good *Pears*, though not so Excellent as those which are tender, or, as 'twere, Buttered.

I shall tell you in another place what sorts of *Pears* grow stark naught when they are too long a Ripening, and of what Kinds, the biggest *Pears* are commonly the worst: And on the contrary again, of what other Sorts, the little ones are regularly and ordinarily good for nothing.

Nay, and the very *Apples* come to do Homage to this Month of *November*, and advantageously to display the Proofs of their Merit: The Red *Calvils* signalize themselves above all the rest; and as they pretend to reign alone in this Month, they leave to their Companions, the *Apis*, the *White* and *Grey Pepins*, the *Compendus*, the *Fenouillots* or *Fennel-apples*, the *White Calvils*, &c. They leave to these, I say, the Field free for the Months of *December*, *January*, *February* and *March*.

It seems not necessary to specify any thing more particularly of the Fruits of *December*, because being a Month confining upon *November* and *January*, and coming between both, it is in possession of an ample share of the greatest part of the Riches of both Months; and consequently it may truly be said, That its condition is none of the worst, especially in Years that are a little backward; nay, and as I have already told you elsewhere, we have very often reason to complain, that the principal Fruits of the Season mellow too fast towards the end of this Month; it making a very great many of them grow soft and rotten, as if in effect their Destiny would not permit them to pass any further.

The Order of Nature will not permit that which in few Months time, mounted to its highest degree of Perfection, to subsist long in that Condition; and therefore our Republick of Fruits that shewed it self in so much Lustre and Glory since the Month of *June*, must submit in the following Months to appear with a great change of Dress upon the Theatre, and with a great Diminution of Fortune, notwithstanding which disadvantages, the Month of *January* is none of them, that have the most reason to complain, because there remains for it some of those same *Pears* that so well paid their parts in the two preceding Months. We have already remarked to you by the by, what is the effect of Backward Years, and of Grounds that are a little fatter and stronger than ordinary, and told you, That the Fruits produced by them are something longer time a losing what they brought with them from the Tree; that is, their Hardness, Sowtness and insipidity, which are Defects of which two or three Months keeping perfectly cures them, and there-

Fruits in December.

Fruits in January.

by consequently gives them what they wanted to make them good ; so that sometimes we may have in this Month excellent *Virgoulees pears*, some *Ambrets*, some *Lefchafferies*, and perhaps some *Espines* or *Thorn pears*, and some *St. Germain*, and above all, a great quantity of *Colmar* and *St. Augustin-pears*, which probably may not have begun to appear before ; and together with them, there are to be had some *Musked-pears*, and such as break forth in the month, as namely, the great *Winter Musk pears*, the *Lemon-pears*, &c. Nay, there are no *Pears* so mean, though to the degree of a *Portul*, a sort of *Pear* much renowned in *Poitou*, but think themselves good enough to contribute something to the Riches of *January* : And indeed one cannot but allow, That all these sorts of *Pears* have something wherewithal to render the Month of *January* none of the least esteemable ; because we are now fain to accommodate our selves the best we can with what we have, without standing too much upon Niceties, since we know the happy time of Choice and Abundance to be really past with the last Months of the late expired Year.

Fruits of February, March and April.

One may in some sort say, That in the Month of *February*, and still more in the Month of *March*, the low Ebb of the Empire of Fruits begins in Earnest, it being now fallen into a terrible abject State ; for besides dry and liquid Sweet-meats, and *Lemons*, and *Apples*, and what we call baking or stewing *Pears*, namely, the *Double flowers*, *Donovills* and *Angoberts*, &c. which both in this Month and all along after, till the coming of *May-Strawberries*, make up almost all the Furniture of the Defarts, what have we else left but some *St. Lejus*, which are but little worth, and some *Bugs pears*, which yet are not so much to be slighted, since the *Leni-Season* makes up with them a part of its best days : But particularly there still is left us a certain kind of those famous *Pears* that bear the venerable Name of *Boncretiens*, which, as it cannot but be unanimously confessed, are capable alone gloriously and happily to terminate the Campaign.

I shall not fail in another place to lay before you what must needs produce in you a great Consideration for them, but at present I shall only content my self with telling you, That, if I may be permitted so to speak, we are to look upon them to be, as 'twere, the Rear-guard and Body of Reserve of the Army of Fruits newly disbanded ; for, in effect, that great number of other Fruits having for the space of Eight or Nine Months, fought against and exterminated that Sterility that would have oppressed us without their Assistance, and being at last dismissed, the *Boncretien* remains alone, being, as it seems, the General, who with a small number of Subaltern Officers, gently retires to take up his Winter Quarters in Expectation of new Recruits for another Expedition.

But I am afraid 'tis not enough to have told you what sorts of Fruits are to be had in every Month, there remaining, methinks, one thing still very necessary to be treated of, and that is to shew you with some tolerable Exactness, how long the Fruit of any Tree whatsoever will ordinarily hold out in spending, supposing the Trees reasonably well loaded ; because, unless that be known, it will be hardly possible to regulate what number of Trees one may, within a small matter over or under, need, to furnish one with a handfom provision of them, without troubling ones self to Plant a superfluity of Trees,

Upon which, I tell you, that we may say such a Tree is well loaded, if, for Example, one *Wall Peach-tree* yield Fifty great *Peaches*, and one *Dwarf Pear-tree* bear Fifty large *Pears* ; and if of *Plums* and *Pears* of a midling bigness, each *Dwarf-tree* or *Standard* bear about the quantity of Two hundred a piece ; and of *Figs* in Boxes, one Box yields two or three Dozen, and if of the same, one *Wall* or *Dwarf-Stock* yields about a Hundred, &c. It being certain that as in the first Years of their bearing, all these Sorts of Trees yield much less, so when they grow to their just bigness, and the Years prove good, they bear ordinarily much more Fruit than the proportion I have specified.

This then being Establish'd for a Rule, I shall next observe to you, That Experience further teaches us these Three Things ; viz.

Precedence of Maturity according to the difference of Expositions.

I. First, That Regularly the Fruits of the good *Wall-trees* of every Garden ripen a little before those of *Standards* ; and these again something before those that grow on *Dwarf-trees*.

II. The Second is, That among *Wall-trees*, those facing the East and South-quarters are the first that bring their Fruit to Maturity, which these two first do commonly much about the same time, they both being earlier than those of the West by Eight or Ten Days, and than those of the North, by at least Fifteen or Twenty ; though, in serious Truth, those Fruits of the North are little to be counted upon, unless it be such as some *Butter-pears*, *Craffannes*, and some kinds of baking or stewing *Pears*, &c.

III. In

III. In fine, The third Thing that Experience teaches us in matter of Fruits, is, That as to those *Summer* Fruits that are to be gathered as fast as they ripen ; a *Peach-tree*, a *Plum-tree*, a *Fig-tree*, a *Pear-tree*, &c. yield Fruit for Ten or Twelve Days, and seldom or never pass that time : and as for those *Pears* which use to be laid up in the Fruit-lofts, of which the first are those that are eaten in the Beginning of *Autumn* ; as namely, the *Butter-pears*, the *Verte-longues* or *Long green-pears*, the *Bergamots*, &c. each of those Kinds last about Fifteen or Twenty Days at most, the different Figures of those Trees, and the different Soils, and different Expositions in which they are Planted, lengthening or shortning a little Duration of their Fruit.

As for the Fruits that are for the spending both during the End of *Autumn*, and all the whole *Winter*, which though, what Kinds of Trees soever they be gathered from, are commonly laid up promiscuously together, People only contenting themselves with laying each Kind of Fruit in separate Heaps by themselves ; yet Persons that are very Curious, such as I am, are so accurate as to separate even the Fruits of one and the same Kind into different heaps, laying the Fruit of one Tree of them in one place, and that of another in another, according to the differences of the Figures of their Trees, and their different Expositions, that they may the more precisely know when each of them mellow. Now, I lay, of these Kinds that are for the spending, as well of the End of *Autumn*, as of the whole *Winter* ; there are some that furnish you for a Months spending, such for the beginning of *October*, are the *Pears* called the *Craffanne*, the *Marchioness*, the *Messire-John*, the *Green sugar*, the *Vine pear*, the *Lansac*, the *Flower'd Muscat*, &c. And others that afford a supply for five or six Weeks, such as are for the End of *October* and part of *November*, the *Lausse-bonnes* or good *Louises*, the *Petit-oins*, the *Thorn pears*, the dry *Martins*, &c. Others again there are that supply us for near Two Months, as the *Virgoulees*, the *Ambrets*, the *Lefchafferies*, the *Pastourelles*, the *St. Augustins*, *St. Germain*, and above all the *Thorn-Pears* may last part of *November* and all *December*. Lastly, Some endure till *January*, as the *Colmars* and the *Boncretiens*, that may last all *January* and *February*, and likewise the *St. Lejus* and *Bugs* that are able to supply us both in *February* and *March*.

From hence we may conclude, That, for Example, if a curious Gentleman have in *Summer* time a competent Number of fine Trees of each Kind, and for *Peaches*, *Plums*, *Figs*, &c. have some *Wall-trees* in all the several Expositions ; and for *Pears*, *Plums*, &c. have some others, in both the several Forms of *Dwarf-trees* and *Standards*, provided the Trees be of a full Age to bear, such a Person may reckon that about Twenty Days he shall be reasonably well supplied with Fruits of each Kind. For, for Example, if he have three fine *Wall-Minion-Peach-trees*, such as they ought to be after three, four or five Years Planting at furthest, one towards the East, another toward the South, and a third towards the West ; these three fine *Peach-trees* may supply him with that kind of Fruit for three Weeks together, and yield him in that time about a hundred and Fifty fair *Peaches*, that is to say, seven or eight a day ; and consequently he may have Three hundred, which is at the rate of Fifteen or Sixteen a Day, from six *Peach-trees* ; which is no over great Number of Trees of the same Kind ; and he may have no less than Six hundred from Twelve Trees, which is at the rate of about Thirty a Day ; and that is a very Noble Provision ; the same may be said as to the *Mandins*, *Chevreuses*, *Admirable*, *Violes* and *Nivete-peaches*, &c.

And if from so moderate a supputation, we may expect such a considerable Treasure of *Peaches*, with much greater Reason, what may we not look for from double, treble or quadruple the Number of Trees of those same Kinds of good Fruits ? In like manner, two *Rufflets* or two *Robine pear-trees*, whether they be *Dwarfs* or *Standards*, when they are come to the Age of four, five or six Years, and have been always carefully trimmed and cultivated, may be able both together, to furnish us for at least Fifteen Days, and in that time to give us Two or Three hundred *Pears* ; that is to say, about Twenty a Day, and consequently four *Rufflets* or four *Robine-trees*, will yield us Five or Six hundred of each sort, being about Forty a Day, &c. Likewise two and four *Pear-trees* of what Season soever they be, will yield us of each Kind in particular, a like Provision, which is always to be understood of those sorts of Fruits that are not very big.

The same Thing also holds in the great Fruits of the beginning of *Autumn*. And accordingly, as to *Dwarf-trees*, two great *Pear-trees* of that Figure will in Fifteen Days time, furnish us near One hundred fine *Pears*, and Four will give us near Two hundred, that is to say, about Fourteen or Fifteen a Day : And for *Wall-trees*, two and four *Bergamots* of that Figure will produce no less : In like manner for the Fruits of the latter Season, Two and Four *Dwarf-trees* of *Craffannes*, *Marchioness*, *Thorn-pears*, *Virgoulees*, *St. Germain*, *St. Augustins*, *Ambrets*, *Lefchafferies*, &c. as also Two and Four *Wall-Boncretien-pears* will

The ordinary lasting of the Fruits of every sort of Tree. And first of Summer-Fruits. Secondly, of those of the beginning of Autumn ; and

Thirdly, of the Fruits of the latter Season, and of Winter.

ye'd

yeild the same quantity in proportion. And as for *Standards* and high *Trees*, Two or Four *Pear-trees* of those choice *Kinds* which have the good *Fortune* to thrive in that *Place*, will yield at least double that quantity; that is to say, Two or Four hundred goodly *Pears*: According to the same *Rule* of proportion, Six and Eight will produce Six hundred, Eight hundred, and so forward in infinitum.

That which I have said in the case of *Pear-trees*, may still with greater Reason be extended to that of *Apple-trees*, which excepting the *Red Calvil-trees*, are ordinarily more Fruitful than the *Pear-trees*.

I say nothing of the *Red Fruits* whose Product is measured either by the pound-weight, or by Baskets heap-full, because there is no Body but knows how to guess well enough at them: All the World likewise knows what is the usual Increase of a Bed of *Strauberriet*, a Toist of *Raspberry-bushes*, and of *Curran* or *Gosberry-shrubs*, or of a forward *Wall Cherry-tree*, or of a Standard *Cherry-Agrost* or *Bigaro-tree*. It is also well enough known, That one *Musk-melon* plant furnishes ordinarily but Two or Three *Melons*, but that a one *Cucumber-plant* produces of that Fruit successively Two dozen or more.

Our Curious new Planters then having made upon this Foot, a pretty supputation of the Product of each sort of Fruit, may easily Judge how many Stocks or Plants they shall need to Plant of every of them, without blindly engaging themselves in the Trouble and Charge of two great a multitude.

I know, the greatest part of those that out of an excessive eagerness to have Fruit, undertake to Plant Gardens, are, as it seems, like most new Travellers who ordinarily Travelling for no other Design but barely to content their own Curiosity, will not omit seeing even the least singularities of each Country, though perhaps there are a great many not worth their pains; and though have they been advertised of it before-hand by Men able and experienced that know the Country, and give them that caution to spare them such Fruitless Labour; yet they will not hear them, it being enough to animate their passionate Desire of seeing them, that they have been told the contrary by some other Person, though much less knowing in the Matters in Question than the others.

And so in our Business of Gardening, how many Apprentices or, if you please, Candidates (would I might be permitted to make use of that term) I say, how many Candidates or Novices do we see, that upon the Report of I know not what and who, will flit their Gardens with all that can be call'd the Rascally Sort of Trees? It is easy to find a colourable Excuse for the Excessive curiosity of Travellers, for that when they are once upon the Way to see Things, they may at little Charge, and in little time, inform themselves generally of all Things, so that no person whatsoever shall be able afterwards to impose upon them, or thwart them concerning Things not seen: But in the matter of Fruits, the itching Desire to have all sorts of them, is a Disease so much the harder to cure, because instead of being look'd upon as such, it seems on the contrary to have all the inciting Charms of a singular Perfection: And in earnest, those poor Gentlemen greatly move my pity, because they will never be at quiet, till they have spent a great deal of Time and Money, only to know at last by a long Experience attended with a great deal of Vexation, That there are ten times more kinds of Fruits fit only to be slighted, than there are good and deserving enough to be cultivated, though perhaps they have been forewarned of it by some understanding Friend, but have not heeded his Counsel.

How happy had I been, if during those many years that I was serving my Apprenticeship in this Art, under the Conduct only of my own Head, I had met with an able Director to Guide me? For, above all Things, I should most have needed one to cure me of a kind of mad Fancy one has commonly for that which they call *New Fruits*, though very often they prove nothing else but some common sorts disguised under new Names; which is an unhappiness caused partly by the ignorance of some People, and partly by the affectation of some fantastical presumptuous Pretenders; who, out of a vain desire to be thought richer in such Curiosities than they are, endeavour by this Artifice, to flit up people to Court them for some share of them.

And now, for my part, it shall be none of my fault, if all persons that are curious in Gardening, avoid not all the shelves by which I have passed, and take not at the very first setting out, the shortest and best way that can be taken in this Matter; which is assuredly of a vast Extent, and the number of Persons that have lost their way there, is infinite.

But, in fine, after having set down all the Precautions and Observations above specified, I shall now enter upon the large and particular Account of the Choice and Proportion of Fruits, which I engaged my self to give you, not without telling you by

by the way, That I found it a Work at least as Difficult and Perplexing in the Execution, as I first thought it would be, and perhaps more than I could imagine.

## CHAP. I.

Of the Choice of a Dwarf-tree to be Planted alone;

Or,

To be the first in any other Gardens, where there are more than one.

THOUGH I doubt not but there may be a strong Party of Competitors formed among our best *Pears*, ready to vie Merits for the place of Preference here in Question, yet I shall make no Difficulty, without further Consultation, to declare my self in Favour of the *Winter Boncretien-pear*.

The First Dwarf-tree, a first Winter Boncretien.

So that what Complaints soever the other *Pears* may make against me, for not at least vouchsafing them a hearing; I cannot dispense my self from maintaining and standing by this Declaration, so powerful do those Reasons appear to me that engaged me to make it.

For, First, if, as I may so call it, the Antiquity of its known Extraction may be counted for any advantage to it in this Cause, as it is in so many other more important Matters, then without doubt our *Boncretien* or good *Christian pear* may in that particular pretend it self much more Noble than all the other *Pears*. For though probably all Fruits were created in one and the same Day, yet 'tis certain they were not all known at the same Time, but some sooner and others later: And this *Pear* was one of the first that by its singular Excellencies, gain'd the Admiration and Courtship of the World: The great Monarchies, and principally that of Old *Rome* having known and cultivated it under the Name of *Cristumium* or *Voleumum*; so that in all appearance it often made a noble Figure among those Conquering People, in the magnificent Entertainments they usually made, as well to set out the Splendor of their Triumphs, as to do Honour to the Tributary Kings which often came to pay their Homage to those Masters of the World.

In the second place, the Great and Illustrious Name which it has ever born ever since so many Ages, and with which it seems to have been baptized at the very Birth of Christianity it self; how can it but imprint in all a Veneration for it, and especially in all Christian Gardeners?

In the third Place, To consider it in its self, that is to say, with respect only to its own proper Merit, which is that which is particularly in Question, and can only intitle it to a preference in this place; it must be confessed, That among Kernel-Fruits, Nature presents us nothing so Beautiful, nor so Noble to behold as this *Pear*, whether we consider its shape which is long and pyramidal, or its bigness, which is prodigious, as being for Example three or four Inches thick, and five or six long, and very commonly of a pound weight or more, nay, and sometimes exceeding two pounds, which is certainly a truth of rare and singular Remark: Or particularly, if we cast our Eyes upon its lively Carnation Colour, with which the ground of its natural Yellow is so charmingly set off, when it grows in a favourable Sun and advantageous Exposition, that it attracts the Admiration of the whole World: Add to this, That it is the *Pear* which of all others gives the longest pleasure, as well upon the Tree, upon which it continues still increasing to the view of the Eye from May till the End of *October*, as in the Fruit-Magazine; where easily preserving its self for four or five Months together, it daily pleases the sight of the Curious that have a mind to look upon it, as much as the view of a Jewel or a Treasure rejoices the Master that possesses it. It is the *Pear* that does the greatest Honour at all Tables, and which in all Countries, and principally in *France*, where the Gardens produce a wonderful quantity of them has acquired the greatest Reputation: It is that which is most commonly made use of when any considerable Presents of Fruits are made, and especially such as are sent to remote places, either within or without the Kingdom; and lastly,

lastly, it is the *Pear* for the Beauty of which, the ablest Gard'ners have always Labour'd with the greatest Passion, and that which yields the greatest profit to those which Cultivate it only to expose to Sale. It is always very good stewed or baked, when People have a mind to eat of it a little before 'tis full ripe, and it cannot be denied but it is most Excellent when we give it time to mellow, if it come out of a Garden where the *Soil* is naturally good, or, at least, well Cultivated; and it has this Advantage over and above, That its mellowness is not like that of the most part of the *Butter-fruits*, which pass, as one may say, like Lightning; so that those Sorts of Fruits are no sooner mellow, but they grow soft and pappy, and degenerate into Rottenness; whereas the mellowness of each *Boncretien-pear* continues to maintain it self in Vigour for some whole Months together, as if seem'd with Patience to wait the time when we shall be pleas'd to do it the Honour to Employ it to those Uses for which Nature design'd it.

'Tis true indeed, That in the Order I have establish'd for the Excellence of *Pears*, the first degree of Goodness is altogether wanting to this, because it is not Buttery; and consequently it may seem, that because here our Business is to give the first Rank to that sort of *Pears* only, that can vaunt it self to have the most Excellent Taste, I should not grant it to this which, by my own Confession, is but in the second Class of good Ones.

But though it has not the first degree of Goodness, it is certain, it wants not the second; that is to say, a Pulp that eats short, and is often tender enough, with an agreeable Taste, and a sweet sugred Juice, indifferently abundant, and a little perfum'd; from the Consideration of which, without doubt, it was that our Fathers, to make a great Distinction between that and other *Pears*, added to its Name the Epithet of *Good*, without doing the same Thing in Favour of any other *Pear*; which additional Name has remain'd to it every where in all Countries, but only in *Poitou*, where the People content themselves with calling it only the *Christian-pear*.

And, besides all the Advantages above-mentioned, it has likewise this, which appears to me a very great one, that is, when all other *Pears* are past, this still remains to Honour our Tables till the new Fruits of the Spring; and, by consequence, protracts even so far as that time, the pleasure of those that love raw Fruit. All which sum'd up together, excites in me so much Consideration for the *Good Christian* or *Boncretien-pear*, that I think I should do a kind of Injustice if I should refuse it the Place of a First *Dwarf-pear-tree*.

I know very well it pleases not all the World, and that it is slighted by certain People, that accuse it to have commonly a Pulp or Flesh, that is tough and strong, or, at least, not very fine.

To which I answer, That those are general Accusations, and such as may in a manner be made against all sorts of Fruits; it being but too true, that we are not to expect to find any that are absolutely perfect, and therefore accordingly we call only those good Fruits which have the fewest Defects. I will not deny but that among *Boncretien pears*, there may be some that may deserve the Reproach cast on them by those Persons; but, in my Opinion, they deserve it not always by their own Fault, since it is true there very often are found most excellent Ones among them; and therefore those Defects, when found in these *Pears*, are rather to be attributed to the badness of the *Soil* in which they grew, as not being proper for the producing of good Fruits, or of their Exposition, as being Planted in a Quarter not blest with a favourable Aspect from the Sun; or to the Negligence or Unskillfulness of the Gard'ner, who took not sufficient care of them, or to the over haliness of those that needs will be serving them up before they are come to a fit Maturity.

I know very well too, There are a great many Persons that think a *Boncretien* can never prove good upon a *Dwarf-tree*, and that 'tis absolutely impossible to have any fine ones unless it be upon *Wall-trees*; and therefore, that they will highly condemn me for chusing it for the first to be Planted in a Situation which they pretend directly contrary to it. But though I do ingeniously grant it true, That the *Boncretien* succeeds best upon a *Wall-tree*, especially in acquiring that Vermilion that so well becomes it, and which the full Air on a *Standard-tree* cannot give it in such Perfection, yet I believe I have hitherto pretty well succeeded in disabling a great number of Curious Persons of the false Impression they had against a *Boncretien* upon a *Dwarf-tree*, by shewing them by the certain Experience of several Years, especially in Gardens of a middling Extent, well clos'd and shelter'd from the great Colds, either by good Walls of their own, or by several Buildings, and which consequently are in a good Exposition, and advantag'd besides with a *Soil* indifferently good, either by Nature or by the help of Art; that upon *Trees*

of

of that Figure may be rais'd very goodly *Boncretien pears*; that is to say, very great ones well shaped with a good fine Skin, a little blushed on that side next the Sun, and in the rest of their Bodies, of a green proper to take a yellow as they grow ripe; and, in a Word, very Excellent *Pears*, and such as few *Wall-trees* were able to compare with.

And, to put an End to this Contestation, I think it not necessary to make here any other Answers, than, in the first place, to invite our Adversaries to go in *Autumn* and see the *Dwarf-trees* in several Gardens at *Paris*, and at *Vernon*, where they rear such fine ones; and, in the second place, to ask them whether before the use of *Wall-trees*, which is not Ancient, there were no where in the open Air any fair *Boncretiens*? if they say not, all the Back-Courts of the Provinces of *Tourain*, *Angoumois*, *Poitou*, *Anche*, &c. where they grow even upon *Standard-trees*, will evidence the contrary against any that shall deny it: To which add, That the invincible Persecution of the *Tyger-babbs*, keeps the *Pears* too far off from the Assistance of *Wall-trees*, and renders it impracticable almost in those Parts, to raise any of them upon any other *Trees* but *Dwarfs*.

*Tyger-babbs*, a pernicious Insect infesting *Wall-pears*.

In fine, when the whole Matter is well examined, I am perswaded, That whosoever shall count on one side the Enemies of the *Boncretien* upon a *Dwarf-tree*, and the Reasons they think they have to condemn it for, and the other shall reckon up its Approvers, with the Experiences they have on their side, will find the Number of these latter greater than that of the other, or, at the least, equal to it; and therefore I think I have enough wherewith to maintain the Preference here in Question.

Away with all those Different Kinds of *Boncretiens* which some Curious Persons have fancied, and which they would persuade us to be Real, as the Long, the Round, the Green, the Golden, the Brown, the Satin, that of *Anche*, that of *England*, that without Core, &c. For all these are to be found upon one and the same Tree, and assuredly make but one single and only kind, the general mutual likeness not only of the Wood, Leaves and Flowers of all these pretended sorts of *Boncretien-trees*, but also more particularly the resemblance of the Figure of the *Pear*, of the time of its ripening, and of its short-eating Pulp and sugred Juice, &c. visibly confirm this Truth.

No really different kinds of *Winter-Boncretien*.

The Differences of *Soils* and Expositions, of dry and wet *Summers*, and of Vigour and Weakness in a Tree, whether it be in the whole Tree, or only in a part of it, &c. Those Differences, I say, cause these other little External Differences of Colour, Figure, &c. The *Wall-tree* will produce Fruit more golden than green, and the *Dwarf-tree* more green than golden; and the *Dwarf* grafted upon a *Free-stock* will produce greener Fruit than that which is grafted upon a *Quince-stock*.

If the Tree be sick, whether it be young or old, it will bring Fruit without a Core, and upon that very same Tree, if there be any vigorous Branch, as it often enough happens, there will be a Core in the Fruit that grows upon that vigorous side, though there be none in the *Pears* that grow upon the infirm Branches; and if from that yellowish and languishing side, a Branch betaken and grafted happily upon a sound and lively Stock, it will produce a Tree both green and brisk, which will shew not only the Conformity of its kind with that of other *Boncretiens*; but likewise its good Health, as well by the Core as the green Colour of its *Pear*: Upon which occasion I shall tell you, That such *Boncretien-pears* as grow yellow upon the Tree, and have a Skin that feels extraordinarily soft, are apt to have but a very indifferent goodness.

A good Fruit-Branch will produce a *Pear* long and large, and a Fruit-Branch of a little more interior Goodness, will form its Fruit short, flat and roundish: A good *Soil* gives it a fine Skin, and a delicate Pulp, whereas a fat and moist Earth renders its Skin rough, and the Pulp gross and coarse.

They might as well make different kinds of great and little, of horned and crumpled, of well shaped and well look'd, &c. which would be a very ridiculous fancy, which is carefully to be avoided.

The *Winter-Boncretien* then, such a one, in a word, as is every where known by Persons of Quality for such, without ever changing its Name, as most other Fruits have done. This *Boncretien*, I say, should be then the *Dwarf-tree* that I would Plant in a little Garden well qualified, where it should be design'd to Plant but only one *Dwarf-pear-tree*; and this same *Pear-tree* should be likewise the first I would chuse, not only for a Garden in which I should have room for a second *Dwarf*, but also for all the other Gardens alike well qualified for it, in which I should have room for many more such Trees, and particularly if there were but little Walling for those Trees that should be designed for that Station. And this *Boncretien-tree* should first be grafted upon a *Quince-stock*, chiefly because the *Boncretien-Dwarfs* grafted on *Free-stocks*, commonly bring Fruit

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furnished

spotted, small, crumpled, &c. And consequently disagreeable to the sight: In the second place, it should be Planted in that part of the Garden facing the *Wall trees*, nearest the Wall expos'd to the most favourable Sun; and lastly, immediately after the End of *August*, I would have the leaves taken off that hindered the Sun from shining upon the Fruit, which are all Precautions extremely important.

I am not yet speaking of those Country Gardens that want all the good Qualities, and other good Conditions which we have newly described in respect to the ordering of small Gardens, and which yet I could wish to all good Fruit Trees; for then I should be of a very different Sentiment from that I declare my self of here in regard to our *Boncretien*; for I would Plant but little of it there, unless it were in the Figure of *Wall-trees*; being resolv'd, in fine, whatever it cost, to Plant some *Boncretiens* in all sorts of Gardens, since, in Truth, we have nothing better for the End of *Winter*, than this Noble Fruit.

## CHAP. II.

Concerning the Choice of a Second Dwarf-pear-tree, and after that, concerning the Choice of a Third, Fourth, Fifth and Sixth of the same, &c.

NOW let us see upon what *Pear-tree* our Choice will fall to be the Second Dwarf, as well of that little Garden where there can be but Two, as the Second of all others, where there is room for a greater Number; for truly it is a point not over-easie to decide.

We have above all the rest, Six different sorts of *Pears* that put in briskly for this Second place, nay, and which can hardly brook without murmuring, that the *Boncretien* should peaceably enjoy the Honour it has newly received, which are the *Butter-pear*, the *Autumn Bergamot*, the *Virgoule*, the *Leischafferie*, the *Winter Ambret* and *Winter Thorn-pear*: Nay, and besides there are, the ancient *Petit-oin*, the *Louise-bonne* or *Good Louise*, with four new Commers, namely, the *St. Germain*, the *Colmar*, the *Crafsme*, and the *Marquis* or *Marchioness*, which finding themselves provided with sufficient Merit, want not the Ambition to enter into this Dispute, every one of these Twelve pretending feverally to have more Perfections, and fewer Defects than any one of its Rivals, or, at least, to be nothing inferior to them; and accordingly pretending too, to win from them the Place that is here in Question.

And I grant, they all have such powerful Motives for their several Pretentions, that we cannot be censured to have made an ill Choice to which of them soever we shall give the Preference: However, my Judgment is, That these Six last ought to retire for a time, and leave the Six first to fight out this Quarrel; and I shall give, if I be not mistaken, such good Reasons for it, that I hope their Patrons will be satisfied with them. But before I declare my self for any one of these Six, it will be necessary to examine separately, and without prejudice, all the several Reasons pleaded by every one of them.

I begin with those of the *Butter-pear*, concerning which I must first lay it down for a Conclusion, That as well the red *Butter-pear*, otherwise called the *Ambroise* or *Isambert* of the *Normans*, as the grey *Butter* and green *Butter-pears*, are but one and the same thing; for that oftentimes all these pretended Sorts are found upon one and the same Tree, those differences of Colour having no other Foundation in a manner than those which we have remarked in the *Boncretien*; the fair Exposition of them, or perhaps an indifferent weak Temper either in the whole Tree, or in any particular Branch, producing red *Pears*; and a shady Situation, and the vigour either of the whole Tree, or of any particular Branch of it, making grey or green ones: And the *Quince* and *Free-stock* upon which these *Pear-trees* are grafted, shew themselves by the different Colours with which they tinge their Fruit, the Colour of the Fruit of the *Pear-trees* on *Free-stocks* being quite another thing from that of the *Boncretien* grafted on a *Quince-stock*: Besides which, the dryness or moistness of the Soil in which they grow, fail not to imprint some Marks and Features of their own Fashion.

This being first laid down as a necessary Remark, the Reasons of this *Butter-pear* are, first, That it is possess'd in such Perfection of the first Degree of Goodness, that is to be desired in Fruits, which is a smooth delicious melting Softness, that the Name of *Butter-pear*

The Description and Commendation of the *Butter-pear*.

*pear* was for that Quality given it by way of Excellence; and, in effect, its name is borrowed to give to others whose Merit we would Extol, and therefore this *Pear* believes to have Right to pretend, that not one of the other *Pears* should dispute with it for an extreme abundance of Juice, nor for a fine and delicate Pulp, and rich Taste, which are all the Conditions necessary to constitute an excellent *Pear*.

The Conditions necessary to constitute an Excellent *Pear*.

In the second Place, it pretends to have the advantage to charm the sight, as well by the bigness of its Body, as the goodliness of its Figure, and Beauty of its Colour.

In the third place it is perswaded, It may hope all Things from the Happiness it has to be extremely fertile; so that commonly every Year, and in all sorts of Ground it is laden almost ready to break, and succeeds as well upon a *Free-stock*, as upon a *Quince* one, and almost as well under the Hands of Ignorant as of Able Gard'ners; besides, that it is seldom or never apt to be Doughy, Insipid and Mealy, as are most other tender *Pears*, and that not only, it is not so incommoded by the full Air as the *Bergamot*, but also bears sooner than the *Virgoule*, and produces fairer Fruit than any of its Competitors. Here are without doubt a great many Reasons, and all of great Weight and Authority, strongly to prove and confirm the right of the *Butter-pears* claim in this Cause.

Nay, its Friends would fain believe further, That if the *Butter pear* could be had at all Seasons of the Years, and we could cure our selves of the natural Curiosity we have for Change, and for the Variety of Fruits, that in that case, we ought not to think of any other than this Famous *Butter-pear*, it being certain, That it is really so Excellent, that by the Confection of all, at the End of *September* when it begins to ripen, we are well enough content to see the *Peaches* pass away, which is to say, a great deal in its Commendation.

The *Autumn Bergamot* making no great Account of all that has just now been said in Favour of the *Butter-pear*, presents it self to stop this Question of Precedence from being so soon decided: Its Party is very numerous and formidable, which is as much as to say, its Excellence is very much known: And indeed I see a Thousand People that assert, That if it be considered with respect to all the Ingredient Parts of its Goodness; that is to say, its tender and melting Pulp, its sweet and sugred Juice, and the little smack of Perfume that accompanies it, it is more valuable than all the other *Pears* in general; they also affirm, That Fruitfulness is not much less on the *Bergamots* side, than on that of the *Butter-pear*, since it is ordinarily loaded with a sufficient abundance, and so quickly repays the pains of those that Cultivate it. Add to this, that contrary to what we find by the Experience we have of almost all other Fruits, it may be said in its Favour, and with Truth, That a middling *Bergamot-pear* is as good as the biggest, nay, and that very often it is the middling one that is the most Excellent, though it may have appeared to be the most despicable, which Advantage ought to be esteemed as a singular and considerable Argument in its Favour. This *Pear* commonly uses to furnish the End of *October* and part of *November*, and sometimes passes on as far as *December*, which gives a wonderful Pleasure to our Curious Gentlemen; so that, in truth, we had need to provide our selves with Trees of them in different Expositions, in divers sorts of Ground, and upon different Stocks; that is to say, Grafted upon *Free-stocks*, and upon *Quince-stocks*, and in the various Figures of *Dwarf-trees*, *Wall-trees*, and even of *Standards* too, the better to assist the Inclination this *Pear* seems to have, to entertain us several Months together.

The *Autumn Bergamot*.

Its Description and Character.

I shall note by the by, That you are not to believe there is any other difference in *Bergamot-pears* (I mean those of *Autumn* and not of *Summer*) but what consists in the Colour only, but then that difference is real; for indeed there is one of a greenish grey, which is simply named the *Bergamot*, or the *Common Bergamot*, or the *Pear de la Thiere*, or de *Recon*, &c. they all signifying but one thing; and there is another that is strip'd with yellow and green streaks, which makes it be called the *Stuffed Bergamot*, this motley Colour appearing at the same time both in the Wood and in the Fruit; but as to their internal Excellence, it seems to me to be equal both in the one and the other, when they are both as good as they should be; they also agree together in the same proportion of bigness, which is sometimes of three Inches Diameter in thickness, but most commonly but of one and a half or two Inches; they likewise agree both in having a flattish shape, and an Eye or Crown sinking hollow in, and a short and small Stalk, and polish'd and yellowish Skin, and a little moistish when it is ripe, &c.

Would to God it were true, there were a sort of *Latter Bergamots*, or otherwise *Less Bergamots*, and that every Year we could be sure to have some of them till the End of *March*, as sometimes it happens; for in that case we might have just Grounds to brag, that we had for, at least, four or five Months in the Year, the real Treasure of Fruits.

Some certain curious Persons would fain have perswaded themselves and me too, that they infallibly had this sort of latter *Bergamots*; but to my great regret, I cannot forbear confessing, that to this present time I have not been able to convince my self that I have attained any such good Fortune, although in truth I have been wanting neither in Care, nor Diligence, nor in any other Precaution that might contribute to the making a Conquest of that Importance; for what have I attempted for that End, what in Pains and what in Expences, is infinite as well as to no purpose, and the particular Account and Relation of it would be but troublesome and disagreeable.

That which has given occasion to speak of such Things as late *Bergamots*, is, That in some very rainy Years, or from some Soils more fat and moist, or in some Exposition less Sunny, or from some Tree more Vigorous than ordinary, we commonly keep some as long as till *Lenx*, and thereupon we take pleasure to deceive our selves with the hopes of having the like every Year: But, the truth is, that commonly chance has more part in all this than any thing else; for the same Tree which produces some for the Month of *October*, yields some others likewise sometimes for the Month of *March*, which happens chiefly when any particular Branch of it has blossom'd much later than the rest, the *Pears* which were the last in knitting, being commonly the last that ripen on that Tree; but that happens but very rarely: Or else we may say very probably, That the *Bergamots* we have so in the latter Seasons, are of the growth of such *Standard-trees* as are Grafted upon *Free-Stocks*, and perhaps but little shone upon by the Sun; the success of such Trees being ordinarily very dubious and uncertain, and particularly for the producing of *Pears* that are fair, agreeable to the sight, and good and backward. But howsoever some such are sometimes gathered, which keep a little longer than those that grow on *Wall-trees* and *Dwarfs*: And therefore it were to purpose enough not for the Curious, of whom we treat here, that have but a very little Ground, but for those that have a great deal, to venture to Plant some of them in all manner of Fashions; for, in line, they ought not to fail to make what Provision they can of *Bergamot-pears*.

Besides these above-said Advantages of the good kind of *Bergamot*, it has yet another that methinks exalts it much above the *Butter-pear*, in what concerns the present Contestation, which is, that the *Butter-pear* meets often at the same time with the *Peaches*, *Figs* and *Muscad-Grapes* of mid-*September*, three sorts of good Fruits that all the World passionately affect, and in favour of which it may be said, That among all Delicate, Nice and Knowing Persons, they are so well received, that scarcely any *Pears* dare venture into their Company; whereas the *Bergamot* ripens not till those *Peaches*, *Figs* and *Muscats*, nay, and the very *Butter-pears* and *Verte-longues*, or *green-long-pears* are ended, and so comes in all alone towards the end of *October*, that is to say, in a time when without its assistance, we should be reduced to a great scarcity of good Fruits, the *Pears* call'd the *Lansac*, the *sugar-green*, the *Flowery-Muscad*, *Rousseline*, *Bezi de la mote*, *Vine pear*, *Messire-John*, &c. not worthily enough supplying the place of those last pass'd; and therefore by consequence, from hence they would pretend, That as to what concerns a little Garden, and that for the Reasons declared in the beginning of this Third Book, it is more convenient to Plant in it, for a second *Dwarf-tree*, a *Bergamot*, than any other *Pear-tree*.

The Partisans of the two preceding *Pears*, the *Butter* and *Bergamot*, are methinks surprized to hear say there are any that dare to enter the Lists against them; and whatsoever the others can allege they look upon as a piece of Rashness, and therefore will hardly vouchsafe to hear them; and if they consent to it, 'tis only to answer them in Terms of Contempt and Railery, or rather with design to gain their cause against them with so much the more Glory and Security.

But for all that, the *Pear* of *Virgoulé*, which they call *Bujaleux* in *Angonmois*, *Chambrette* in *Limousin* or the Province of *Limoges*, the *Ice-pear* in *Gascony*, *Virgoulé* and *Virgoulé* in so many other Places, and which after the Example of the *Pears* of *Besidery*, *L'Eschasserie*, &c. ought, in my Opinion, to bear the plain Name of *Virgoule* before any other; that which makes me judge so, is, because we had it from a Village called *Virgoulé*, near the Town of *St. Leonard* in the *Limousin* Country, where, in all appearance, it had pass'd a long time without any Lustre, neither more nor less than just as a *Pearl* shut up in its Shell; but at last, as well for the Happiness of our curious Gentlemen, as for the Ornament of our Gardens, it was advanced out of that Village by the Liberality of the Marquess of *Chambret*, who was Lord of it, and who was pleas'd to give it us under the Name of his *Pear* of *Virgoulé*; since which time it has begun to make it self be talk'd on as Famous, so that at this Day, notwithstanding the Brags, I say, of the two preceding *Pears*, it, not without Reason enough, pretends to the Honour which is here propos'd.

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It is a *Pear* of a Figure pretty long and thick, being three or four Inches long, and two or three in thicknes; its Stalk is short, fleshy and bending; its Eye or Crown indifferently great and a little hollow; its Skin smooth and polish'd, and sometimes coloured, and which from green, which it was upon the Tree, grows yellow as it ripens, and in ripening grows tender and melting; so that when it is well nick'd in the gathering, it proves one of the best Fruits of the World: And accordingly its Reputation has made such a Progress, since, that in a few Years time, it has spread it self into as many Gardens all over Europe, as any *Pear* that we know.

This *Virgoule-pear*, priding it self, as it may seem, as well in the Extraordinary Vigour that accompanies its Tree in all Places, and draws to it the Admiration of all Beholders, as also in the Merit it pretends to be ennobled with, and besides being offended at the injurious Contempt with which it was but now treated by the others, asserts for the Establishing of its Right, That Nature has not only endowed it with all the good Qualities, namely, of a tender and melting Pulp, an Abundance of sweet and sugred Juice, and a fine rich Taste, and of a plentiful Increase, which render the *Butter* and *Bergamot-pears* so considerable; but that besides, that it has the assured Advantage to begin to ripen almost as soon as the *Bergamot*, and yet to last much longer than that; and in earnest it alleges, That often from the very beginning of *November*, it is in a condition to content the Curious, which happens to those of them that are rais'd upon *Wall-trees* exposed to a good Sun, or that grow otherwise in a dry and light Soil, and that particularly it signalizes it self by furnishing a great quantity of Fruit all the rest of *November*, all *December*, and sometimes for part of *January*, which cannot be said of the *Butter-pear*, and but little, or, at least, very rarely, and by pure hazard, of the *Bergamot*.

Which induces the *Virgoule-pear-tree* to demand pretty boldly, whether it be not true, that its Fruit is not only Excellent for Taste, but of an agreeable Figure to the Eye, so that those *Pears* of it that grow in a fair Exposition, acquire an admirable vermilion bluish; this *Pear-tree* further demands, if it has not the gift to form the fairest Trees of all other Fruit-plants, and to succeed admirably well in the Figure of a *Dwarf-tree*, that is to say, in that very manner of Trees, the Planting of which is at present in Question; it also further maintains, That the Distinctions of dry or moist Grounds, of *Free* or *Quince*-stocks, and of *Standards* or *Wall-trees*, are ordinarily of no such great Importance to its Wood, as they are to that of the *Bergamots*; though in respect of the inward goodness of the Fruit, those sorts of Differences work almost the same Effects as in the others: It is then true, that the *Virgoules* are not only not subjected to that sort of Scabbiness which disfigures the *Bergamot-trees*, and renders them hideous to look on, and too often kills them, or at least hinders their Fruitfulness; but on the contrary, shoot out regularly on all sides, store of fair Branches, and are sen always with a smooth and shining Complexion; as if really one had taken the care to rub them, to make them bright.

The *Virgoule* therefore pretends, That the time of its continuance in maturity, which is about Three Months, and the Beauty of its Tree, which never fails, ought to prevail here to carry the Cause for it, against both the *Butter* and *Bergamot-pear*, and against all other *Pears* which would oppose it, since, besides those Advantages, it is inferior to none of the rest, either for Abundance of Increase, or in the Point of Goodness.

The *Leschasserie-pear*, which some call the *Winter Green-long* or *Verte-longue*, and others *Besidery-Jandy*, and which has not appeared in our Gardens above Twenty Years; this *Pear*, I say, might put in alone for a Title here, so strong is its Party; but it chufes however rather to join with the *Ambret-pear*, which is of ancient standing among us, and in great esteem, and is called in some Countries by the Name of *Cheat-Servant* or *Trompevalet*.

These two *Pears* do not think themselves overcome by all that has been said to the advantage of them that have first spoken; they will not make it their Business to destroy one another, being agreed to serve alternatively at the Entrance of Gardens, and so their principal Ambition is to remain united, and allied in Interest and Friendship, that they may be able the more vigorously to defend themselves against the three precedent ones: And that which contributes the more to the strict Union they have made one with the other, is, That, in effect, they have some resemblance one with the other, first in their Shape, which appears roundish in both; though the *Ambret* be a little flatter, and hath its Eye or Crown hollower and deeper sunk, whereas the *Leschasserie* hath its Eye or Crown quite jetting out; and in that some of them have the form of a *Lemon*; they also resemble one another in the second place, in their bigness; which is of a middling size, and of about two Inches Extent every way; in the third place, in their Colour, which upon the Tree

is greenish and speckled, though the *Ambret* be commonly of a deeper and ruddier Colour, and the *Lefchafferie* lighter and yellower, but especially when it grows ripe. These two *Pears* further in some degree resemble one another in their Stalks, which in both of them are frait and pretty long, though that of the *Lefchafferie* be a little thicker of the two; and in fine, they resemble one another as well in the time of their ripening or mellowing, which is in *November* and *December*, and sometimes in *January*, as in the fine and butter-like substance of their Pulp, and in their sugred and somewhat perfumed Juice, but that is perfumed with a scent to agreeable, that nothing can be wished for more delicious: The *Lefchafferie* has a little more of it than its associate, and the Pulp of the *Ambret* is sometimes a little more greenish; its Kernels are blacker, and, as one may say, lodged more at large in their Apartments, than the Kernels of the other, and even the Skin of it feels ordinarily a little rougher; and besides the *Lefchafferie pears* are pretty often, as one may term them, bunch'd and warty; but as to the Wood of their Trees, they are very different one from the other, in that the Wood of the *Ambret* is extremely thorny and prickly, and is exactly like one of those wild Trees commonly seen in Hedges and Thickets, which Quality is not to be found in that of the *Lefchafferie-tree*, which is commonly pretty slender, and shoots forth some Points but not sharp enough to prick the Fingers of them that meddle with it, as do the *Ambret-trees*. These two *Pears* found the Pretensions of their Claim of Preference upon the Fault that is found with the *Butter-pear* about the time of its ripening, and upon that objected against the *Bergamot* for its Scabby Wood; and lastly upon that Accusation brought against the *Virgoule*, not only for being so long before it bears, but for having some kind of disagreeableness in its Taste; so that having at least all the good Qualities of those *Pears*, both in their Fruit, and in the Disposition of their Plants to be wrought into beautiful Figures of *Dwarf-trees*, without participating of any of their Defects, they pretend it their Right to be preferred before those which are so notably incommoded with them, that they can neither avoid nor disguise them.

The *Winter Thorn pear*, which well knows its own worth, will not let it self be condemned neither without speaking for it self: It is a very fine *Pear* that approaches nearer a Pyramidal than a round Figure, though it has almost no part that is small in its shape, so that it ends in very little or nothing of a bluntness Point towards the Stalk, which Stalk is pretty short and small, except where it comes out of the *Pear*, where it is a little fleshy; every where else the *Pear* is all over in a manner of the same bigness, being about Two or Three Inches thick towards the Head; it is particularly much bigger than the ordinary *Bergamot*, or than the *Ambret* and *Lefchafferie*; it has a satiny Skin, and a Colour between Green and White; it sometimes Ripens before the two last preceding ones, but most commonly at the same time with them, and sometimes too after them; it is likewise of a tender and butter-like Consistence, having ordinarily a very fine and delicate Pulp, an agreeable Taste, and a sweet Juice relished with an admirable smack of Perfume; it also produces fine *Dwarf-trees*, and prospers as well on *Free* as on *Quince-tree-stocks*, when the Stocks are good, and the Ground is well qualified, that is, of a dry rather than moist Temper. It has little to say against the two last, and especially against the *Lefchafferie*, and ingenuously confesses the good Qualities of both of them, but yet without consenting to give them the Precedence, till there shall be a Regulation for it; but as for the other *Pears*, it objects to them the same Defects which these last just now Reproached them with.

It is therefore now the Question how to terminate this Contestation which has appeared but too long, upon which, having maturely examined all the Reasons alledged by each of them, I confess I have a very particular esteem for every one of them; but yet, in regard to the Trees which give them us, we must not judge the Question here under Discussion, altogether upon the same Foundation as if we were only examining the Merit of each Fruit in particular, and by comparing them only one with the other; for upon the bare Foot of Merit, in what Garden soever it were, where there were to be but two *Dwarf-pear-trees*, I should ever incline to give the second place to the *Bergamot*, which I honour infinitely, and that, methinks, cannot be too much honoured, as being as it were the Queen of *Pears*: For indeed it is like the Excellent *Musk-melon*, its Pulp appearing at first firm, without being hard or stony, and fine and melting without being Doughy or Mealy, and its Juice sugred and a little Perfumed without having any mixture of sharpness or wildness; and lastly, its Taste rich, and wonderfully delicious, and accompanied with something of Noble: For such a *Pear* as that, may it not want to have approached very near the Perfection of Fruits, and ought it not to serve for a Rule and Model to all those that shall pretend to be entered into the Catalogue of good Fruits?

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This Decision, in favour of the *Bergamot* to the Exclusion of the other *Pears*, would not at all surprize those curious Persons that have tasted those that are really good; for assuredly it excels the *Butter-pear*, which cannot deny but it has a little mixture of sharpness in its Juice; it surpasses the *Virgoule*, in that it is a nimbler-bearing Tree than that, and is not at all subject to that little odd strawy Taste, which, as I may so say, persecutes the most part of the *Virgoule pears*, and does them a Thousand ill Offices in good Companies; it no less surmounts the other three Competitors, the *Lefchafferie*, the *Ambret* and the *Thorn-pear*, because that certainly they have nothing in them more Excellent nor more Advantageous than our *Bergamot* in the point of perfect goodness, but, as one may say, without any design to offend them, that both the one and the other have sometimes the ill hap to have a faint and insipid Juice, and a hard or mealy Pulp: But these Faults are not to be objected against those kinds of Fruits in general, but are rather Defects that proceed from the Coldness or Moistness of the Year, the badness of the Soil, or the improper Exposition in which they were produced.

Yet that which may sometimes hinder the *Bergamot* from receiving the benefit of this my Declaration, is, the unhappiness the Wood of its Tree has to be of so delicate a Temper, that instead of making an agreeable Spectacle in Gardens, it does often but vex its Owner with its Scabbiness, which is an evil that every where almost persecutes both its Fruit and Tree. And that is the Reason I do not willingly venture to Counsel the Planting any of them any where in the Figure of *Dwarf-trees*, and much less in little Gardens: But yet, if notwithstanding this Deformity, which to much disoblges the Eyes, any Persons be minded, because of the Excellence of its Fruit, to Plant any of them in all sorts of Gardens, whether great or small, supposing always the Ground to be fitly qualified, I would have those chosen that are grafted upon *Free-stocks*; but if the Ground be fatty and a little moist, then I would advise them to take those that are Grafted on *Quince-stocks*, and further, I would wish them to take the *Striped Bergamot*, otherwise called the *Suisse Bergamot*, rather than the common one, because being both of an equal goodness; and as difficult to Rear the one as the other, it seems in my Judgment more to the purpose, to fix first upon the *Striped* one before we Plant any of the other sort, because it has the advantage to surpass this latter in Beauty of Colours; but, in fine, if none be Planted of either of them in the form of *Dwarf-trees*, we should not fail however to Plant a great many *Wall-trees* of them in great Gardens; and I would have one *Standard tree* of them Planted, to make a Figure in a great space which without that, would appear too much Ungarnish'd. But above all, it is most advantageous to Plant one of them in the Neighbourhood of a great Wall exposed to a good Sun; for I have had very great Satisfaction in doing in the *Kichen-Garden* at *Versailles* what I now Counsel to others: I also Plant some of them of the size of half *Standards*, as well in the middle of Squares, as on the sides, and particularly I plant some of them at two or three foot distance one from another, as in Nursery-Gardens; and I take the same way with all the other delicate sorts, as the *Petit-oin*, the *Thorn-pear*, the *Louise-bonne* or good *Louise*, the *Sugar-green*, &c. to which a cold and moist Earth is absolutely contrary, and I gather from them for Eight or Ten Years, a considerable quantity of very good Fruits, and when those Trees grow too big and seem to encumber the place where they are, I take them away, and plant young Ones elsewhere, to have the same Assistance from them as long as 'tis possible.

The Article concerning this *Bergamot pear*, has given a great deal of trouble to decide it; I return now at last to declare my Judgment of those sorts of Trees which, together with the Beauty of their Fruit, have the Advantage to be graced with a beautiful Wood: And therefore I incline here to give the second Place to the *Butter-pear-tree*.

The Second, or perhaps Third Dwarf-tree.

A First Butter-pear-tree.

The last Reproach which was made to the *Virgoule*, concerning some Oddness often found in its Taste, will be favourable to the *Butter-pear* to maintain it in a Rank before that; besides a particular Right of Antiquity of this *Butter-pear*, that has procured it a singular Veneration among all the World, to which the latter cannot so soon pretend, as also its ready Facility in bearing, which is an advantage belonging to the *Butter-pear-tree* preferably to the *Virgoule*; and lastly, besides that 'tis certain, though they be both admirable, yet may we truly say, that generally speaking, the *Butter-pear* makes it self more desired by all the World than the *Virgoule*, and therefore that this latter ought to give place to a first *Butter-pear-tree* in little Gardens, which have but two *Dwarf-trees* in all.

And

The second place adjudged to a *Dwarf-pear-tree*, wherein the *Butter-pear* is to be preferred to the *Virgoule*.

And for its Consolation, it may expect its turn will come very quickly to be treated elsewhere much better than the *Butter-pear*, that is, much more multiplied in Trees of its Kind; for in this respect, it will in a very high degree surpass the other in most great Gardens, which we shall afterwards Plant.

How to prevent the ill Taste in *Virgoule-pears*, and from what Cause that Taste proceeds.

But yet it is of a great Importance to this *Virgoule-pear*, that we should not leave it under the Defamation of the publick Reproach which the other *Pears* cast upon it, because of its odd Taste. We cannot deny but there have been many of these *Pears* found with that Defect; but then 'tis not impossible to exempt them from it; for it proceeds from their having been too long kept upon Hay or Straw, or perhaps too long smothered up in some Cupboard, where they had no Air, or in a kind of Cellar, which is never without some Taste of Must; or else in some Fruit-store-house too close kept shut, when full of other sorts of Fruits, and perhaps in some part of it Infected with some strong Smell whatever it be: For all those Scents together make but a very disagreeable Smell, of which this kind of *Pear* is unhappily very susceptible. The only Remedy in Question is then, to put them up in some place where none of these Inconveniences are to be met with, and consequently having a Fruit-loft for that purpose, well Qualified against the great Cold and Moisture, the Boards of it must be covered with some Moss extremely well dried; and then the *Pears* must be placed on it at a distance one from the other, and Air must be given them as often as the Weather is fair: With these kinds of Precautions, which are not very difficult, we may be assured to have all Winter long these *Virgoule-pears* preserved from any ill Taste. They are, as we have said, fair and large, and most excellent, provided first, that, without being too much wrinkled, they appear only a little withered; and secondly, that they be yellow almost all over the whole Extent of their Skin; and thirdly, if in squeezing them a little with the Thumb near the Stalk, they give way without shewing any softness at the Heart; that is to say, in fine, if they come so well to ripen and mellow, that their Pulp is become tender and melting: For if, though in appearance ripe, they remain firm and hard, as it happens sometimes to them that have been laid up in moist Places, or which are of the Product of a very Rainy Summer, or of some Northern Exposition, or some cold and watrish Soil, then it cannot be denied but that these sort of *Pears* prove both mealy and insipid, and by consequence disagreeable. So it is, that among the Things of this World, that are the most perfect, there may be some of them that may fall into Corruption, and at the same time into Contempt; but the Fault of one particular thing ought not to be made a matter of Reproach to the whole general Kind.

A singular Remark about *Virgoule-pears*.

One thing that is extraordinary enough, I have to remark concerning these *Pears*, is, That such of them as perhaps fell off the Tree, or were gathered about Fifteen Days before they should have been, and which because of that grow a little withered (for if they were much so, they would be despicable in all manner of Respects) these sort of *Pears*, I say, though a little unhandson to look upon, yet at length being thoroughly mellowed, are almost always of an admirable Taste, which can be hardly said of any other Fruit: But yet I do not Counsel any to gather them very long before their time; as for Example, before the End of September, because the ordinary Winds that Reign at that time, spare them, and sometimes more than they desire, the taking of that Pains; and therefore we may comfort our selves then, when any of them happen to fall, with the Expectation that they will mellow later than the rest, and will be less subject to grow doughy, and we shall be apt to wish it may happen oftner, that we may without fail have some *Pears* that may be good, and at the same time fair, sound and indifferently wrinkled. I shall in another place explain to you more particularly what time they are to be gathered, and what are the infallible marks of their true Maturity, as well as of that of all other Fruits; which are Articles of very great Importance, and in which consist the principal Points of our Curiosity.

The *Virgoule-pear-tree* shall be regularly the Third Dwarf-tree.

The Third Dwarf-tree. A First *Virgoule*.

November, December and January.

Which we will Plant in a Garden which is able to hold but three, and methinks now, this *Pear-tree* would be much in the wrong to complain, since it may be affirmed with Truth, that it has the Honour to see it self preferred before other marvellous *Pears*, which are following after it; as namely, the *Leschasserie*, the *Ambret*, the *Winter Thorn-pear*, the *Crafsme*, the *St. Germain*, the *Colmar*, the *Marchioness*, the *Petit-oin*, the *St. Augustin*, the *Roufflet*, the *Robins*, &c.

All

All the World must necessarily grant, That the Name of *Fruit-Garden* cannot properly be given to any Garden whatsoever, in which are not to be found the Thirteen or Fourteen principall Sorts of *Pears* we have; and likewise, that we cannot dispute it that Title, when they all meet there in Company. Happy is he that has planted with so much Knowledge and discerning Judgment, as having no more room in his Garden but for such a small number of Trees, to have so wisely cul'd out and join'd together the best Fruits we know.

To continue the Order of my Choice, I place the *Leschasserie-pear* immediately after the *Virgoule-pear*.

The Fourth Dwarf-tree. A First *Leschasserie*.

November, December and January.

Before which, perhaps, some Curious Persons will make no scruple to prefer it, so true it is, That it often seems a *Pear* without Defect, and consequently a Fruit of the most excellent goodness: I will say in its Favour, That I never tasted any thing better in matter of *Pears*, than some *Leschasseries* growing in the open Air upon Trees, as I may say, abandoned. They were of a midling bigness, having a Skin and Shape that seemed quite wild; but, in truth, in eating them even with their Skin and all, they quite charmed me with their rich Taste, their little delicate perfumed Scent, and their fine and melting Pulp: In fine, I cannot be silent of the Astonishment they put me in, and of the pleasure I had, and continue to have every Year in eating them; and perhaps I might say, That the best *Bergamos* in the World would have had much ado to have maintained its Post before them; for those which I had of the same sort from *Wall-trees*, came not near them any way of the World in point of goodness.

The Fifth Dwarf-tree. A First *Ambret*.

November, December and January.

And this follows it as near as 'tis possible; and indeed is ordinarily a most Excellent *Pear* in every point, having a fine melting Pulp, and a certain rich Taste that is very charming, provided it be of the growth of a good Soil, and that without suffering any Misfortune, or any other ill Accident upon the Tree, it come to its perfect Maturity; but yet I know not what greenish Tincture in its Pulp, and a faintish Taste in its Juice, and particularly a strange kind of unknown, and secret lurking dry rottenness found in some of these Fruits, appear to me three sorts of Defects, for which, in my Opinion, this *Pear* in general ought without Repugnance, to yield the precedence to the *Leschasserie*, and might with good Reason enough do it likewise to the *Winter Thorn-pear*, when it attains all the Perfection 'tis capable of. For indeed, this *Thorn-pear*, when it grows in a Country hot enough, in a dry Ground, and a good Exposition, in Years moderately rainy, and upon a *Standard* or half *Standard-tree* well placed, is so perfect in all its Qualities, that it equals the delicateness of the Pulp of good *Peaches*, and is of such Excellence, that the name of *Marvellous* has been given it in the Provinces of *Angoumois*, *Xennoigne* and *Poitou*, Provinces situated in a marvellous Climate, and which are known to be famous for the great number of Sorts of good Fruits they produce, and of Persons of Quality that divertise themselves there in Gardening: And I confess in good Truth, That among all *Pears*, I find none better than this, when it attains the full goodness of its kind; but, at the same time. I cannot but confess likewise, That it is very hard to find any perfect ones of them; so that one may say of them, and of the *Petit-oin*, *Ambret*, *Louise-bonnes* and *Colmars*, &c. what is said of new laid Eggs, That the least Defect is enough to make them be rejected: Whereas it is not so with other *Pears*, they are not rejected, though they want some degree of natural Perfection, for all *Butter pears*, *Roufflets*, *Boncretiens*, &c. are not every *Pear* of them of the most Excellent in their Kind, and yet that hinders not People from eating them, though but of a midling Goodness.

There truly still remains a small Reproach to be made to this *Thorn-pear*, because it ripens sometimes at the same time with the other *Pears* which I have newly placed before it, and consequently according to those Regards I always have in making this Choice, and from which it will be convenient I should never depart, it would be much better to Plant some good Fruit of another Season in this little Garden, rather than this *Pear*; but to this I answer, That since this objected Inconvenience of over-hasty ripening, happens but very seldom, instead of banishing the *Thorn-pear* from hence for such a Reproach as that, we ought rather to be careful to plant it there, and especially if there be already no *Bergamos* Dwarf-tree, because it makes a very agreeable Dwarf-tree, and easily takes to bear.

I persist therefore to give to the *Thorn-pear* at least

N

Ths

November, December and January.

The Sixth Dwarf-tree. A first Winter Thorn pear.

The sixth place in a Garden well qualified, and that can receive but six Dwarf-trees. And there must a particular care taken of this Tree, to keep its Branches well spread, and to strip it of its Leaves too at the end of Autumn. So that the Pear, whose Colour is naturally green, may receive thereby an extraordinary Coction; and when it comes to be laid up, may grow a little yellowish, to signify the first Appearance of its mellowing; for to say the Truth, when it still preserves the same ground of green in its Skin, it had upon the Tree, as do those of this kind, that grow in a moist Ground, or upon a Dwarf-tree with a top too much tufted, or in a bad Exposition, it lasts indeed till January or February, but 'tis only to vex him that took the pains to lay it up, and keep it; because without mellowing, it grows soft all about the Stalk, and Contracts a cottonish dry Pulp, and a flat and insipid Taste; and, in a word, proves the worst Pear in the World; neither indeed is there any Pear which has need of greater care than this, to make it come to good. It requires to be grafted upon a Free-stock in dry Grounds, and upon a Quince one in those which are moistish. It succeeds not so well in the form of a Dwarf-tree, as in that of a Standard, in those Grounds that are a little strong; and commonly is worth nothing in Soils that are fat and moist, having that Quality in common with some others which I shall speak of afterwards. However, I must needs say, that, with the care I have had to keep my Soil a little raised, and timely to uncover my Thorn-pears by stripping off the Leaves of their Dwarf-trees, I have had very fair and good ones of them for near two Months together; and consequently, that the Defects of this Pear are not always incorrigible, and that when we can preserve it from them, It is a piece of Injustice not to give it place before the two last preceding ones.

I prefer it here before the St. Germain, the Petit-ain, the Craffame, the Marchioness, the Louise-bonne, the Colmar, and the St. Augustin-pears; because, that all things well considered, it is of more worth than they; and chiefly, because the most part of those other Pears mellow in the time of some of the three preceding ones, that is to say, in the Months of November and December; in which, with respect to the smallness of the Gardens we now treat of, we have other Fruits enough to give content.

I prefer it also before the two most valuable Summer-pears, which are the Famous Russelet, and the illustrious Robine, but it is but one degree only to make it march immediately before them; and these latter in their turn shall be preferred before those other five, which are of so great Reputation. And without doubt, this preference given them without any hesitation, ought to stop their Mouths from murmuring, because they were no sooner produced on the Stage. For my part, I make so great account of both of them, that I do not think a Garden that may contain Seven or Eight Dwarf-pear-trees, ought to be without one Russelet and one Robine-tree; which when we have placed, we will proceed to examine what good and considerable Qualities the other Pears can plead, in order to the doing them that speedy Justice thereupon, which we think to be their Due.

Would to God, that in the matter of good Pears, the Months of January, February and March, were able to furnish me as many subjects of Disputes and Contellation to determine, as I am plied with by the four preceding Months; for these latter being so poor and barren as they are, have great need of assistance; but when there will come any to them, I cannot tell. Certain it is, 'twould be a great good Fortune to them, if they possessed any of those good Pears, which pour in in Shoals upon us, as I may say, about the End of Autumn, and the beginning of Winter; I lose not a moment of Time in studying and using all imaginable means, as I have before said, to bring about so great a Happiness.

But to return to my purpose, I proceed then to place these two last Pears, of which we were but now speaking, assuredly expecting, that my Choice of them will be approved. For, methinks, we ought not to delay any longer to introduce here some Summer-pears, having already placed six Sorts of other Seasons: But what must I do to regulate the Dispute that's like to rise between these two Pears, which shall be the first? Why, I will not undertake to decide it of my own Head, it being a Cause too dangerous to judge of in the presence of the Patrons of both the Parties, and therefore not to embroil my self on either side. The way I shall take with them, shall be either to give these Pears an alternative Precedence to be enjoyed by each of them, in their turns, or rather even to let them fairly draw Lots for it: 'Tis not the first Contest of Precedence that has been

been determined this way and that, to the Contentment of both Parties too. So be it then, and accordingly they cast Lots, &c.

The Lot falls upon the Russelet, for the Garden of seven Dwarf-trees.

The Seventh Dwarf tree. A First Russelet.

And therefore that shall be the Seventh in Rank, and the Robine the Eighth.

And in these Russelet-pears, I make no difference between the great sort and the small sort, as do some Curious Persons; for they are certainly both but one, and to prove it so without Contradiction, let us have but recourse to our Eyes, and we shall see one Tree very ordinarily produce both the pretended sorts of them. 'Tis true however, that those that are but of a middling bigness, are commonly better than the fairest (which Observation holds too in some other Fruits, though not in all.) The great Russelet-pears doubtless are of the Product of a fat Soil, whether they grow upon Dwarf-trees or Wall-trees, and the others of that of a dry Ground, or of a Standard-tree.

I shall begin my Discourse of this Russelet-pear by telling you, There is hardly a Pear in the World more known, nor more esteemed than it. I think it is hardly necessary to make a Description of it by telling you, 'That 'tis a Pear of a middling bigness, of a handsome shape, more long than round, with a pretty thick Stalk and pretty long, of a grey Colour, reddish on one side, and of a dark red on the other, with some greenish Parts interlac'd, which grow yellow very opportunely, to give us notice of the Time of its Maturity: Its Pulp is tender and fine, and without any earthy or stony Remains, and its Juice most agreeably perfumed, but with such a Perfume as is to be found no where but in it self. It commonly ripens about the End of August and beginning of September, and at that time, in respect of the good Qualities with which it is endowed, I believe all the World, without hesitation, is agreed, That it may be said of the Russelets, as of the Bergamots and Lefbafseries, that no Pears can pretend any place in the Rank of those that are Excellent; but as they proportionably approach more or less to the goodness of the Russelet, as well as of those two other Pears. And certainly the Merit of this Russelet is so great, that it is in nothing surpassed by its great Reputation: All Ages have Experienced it to prove good in what manner soever one order it. In effect, let it be raw or baked, stewed or preserv'd, or let it be prepared in form of a liquid Compote, or of a dry sweet-meat, it equally maintains its good Character in every manner: And let it be planted in any sort of Ground whatsoever, it will prosper. Have we a mind to have it upon a Wall-tree? It will give Content: Or, is our Fancy to Plant it in form of a Dwarf-tree? It will be admirable that way, and still better upon a great Standard; nay, one may say in its honour (which, among all Fruits, belongs, if I mistake not, only to this) that though among its Pears there are often found some that are better than others, yet there is never seen any of them that can be said to be absolutely bad, provided it be come to its full Maturity; for those that have not that, and much less those that have too much of it, are not at all agreeable.

It is good you should know here, That nothing is more contrary to this Pear, to hinder it from being Excellent, than the planting it against a Wall, because it certainly loses in that Situation, a part of its Perfume; but it grows fair there indeed and large, and in great abundance, and by that, in some measure, Repairs the Defect of extreme Goodness: So that we may lay it down for a Rule, That we ought to Plant few Trees of this Fruit against Walls, unless we make more account of the bigness and quantity of its Fruit, than of the goodness and Delicacy of its Taste; or, unless we think it better rather to have some of them, though but indifferently good, than to have none at all, that being the ordinary Effect of a Wall-tree in respect of Pears and Peaches; for that is of the two, what I would counsel all Persons to chuse, who have a great deal of Walling to garnish, as I shall afterwards more particularly shew, this not being the place to speak of it here. I was not able to resist the Temptation which over-sway'd me, nor to forget any thing that might set out the Excellence of this Russelet; and therefore cannot but observe to you, that there is still one singular Advantage belonging to it, which is, that whereas most other Fruits prove unsuccessful upon the Northern Wall-trees, yet those of this Pear in that Exposition, produce Fruit reasonably good, so that it would not be amiss to plant some Trees of it in those Expositions which commonly are useless, or very bad for other Fruit.

O how happy should we be, if first the Russelet pear could keep a little longer than it does (it having the misshap to be very subject to grow soft and pappy, 'tis its only defect, and one may often be deceived by it, without taking very good heed) or, if chitily it would change place with so many other pitiful sorts of Pears, some of which unprofitably

The Russelet or Russelet-pear described.

Compote, Fruit stew'd in Sugar, after a manner peculiar to the French.

tably come in the first Summer-Months, and some again yet left to the purpose, in the midst of *Winter*; so that this *Russlet*, instead of ripening as it does, at the end of *August* and beginning of *September*, that is to say, in the time of the abundance of good *Peaches* and *Plums*, had but the Gift to come and feast us, either some time before the Maturity of the principal Stone-fruits, or sometimes after they are past. I could not help making this wish, though it be so very insignificant, and beg your Pardon for it. I know well enough, That *Peaches*, when they attain their natural Goodness are, as one may say, the precious *Manna* of our Gardens, and by the general Confession of all, are more valuable than any Kernel-fruit whatsoever; so that few People make their Court to these last, so long as the *Peaches* with their largeness, fine shape, beautiful Colour, and the abundance of their sweet and rich tasted Juice, together with all the rest of their admirable Qualities, continue in a condition to charm the Eye, and move the Appetite.

But yet for all that, the *Russlets* and the *Robines* are esteemed even in the Season of *Peaches*, how plentiful forever these latter be: And likewise, because *Peaches* are commonly more faulty, and more apt to fall short of their due Perfection than *Pears*, and that *Peaches* of the growth of a moist Soil, are good for little, therefore 'tis necessary for them, whose Ground is not very good, to precaution and provide themselves another way, at least by a supply of *Russlet-pears* in their stead, which seldom fails and is never to be rejected; that at the end of *August*, and in the Month of *September*, which is the Season of Mens eager Appetite, and most passionate desire after Fruits, they may be furnish'd at least with some pretty good *Pears*, in case they be so unhappy as to see the most part of their *Peaches* miscarry, or prove not over good.

This *Pear* is indeed small, but it affords this convenience, that it may be gathered while 'tis yet greenish, to mellow afterwards off of the Tree; so that by that means it may be kept some Days, whilst the perfection of its mellowness is coming on, and may, without any diminution of its goodness, be hazarded to make some small Journeys; so that, for Example, one may carry some about one, or send them from Province to Province, when the distance is not too great.

And now, after all these Praises I have given to the *Russlet*, may it not seem to have some Reason to complain of me, for giving it but a Seventh place? I certainly have for it as much Consideration as any curious Person can have; but, in fine, that which ought to justify my Conduct in this Case, is, That when one can compass so much as to have a Garden big enough to contain Five or Six *Dwarf-pear-trees*, one may and ought, in all probability, to have a proportionable quantity of *Wall-trees*, for *Figs*, *Peaches*, *Plums* and *Grapes*. And that so it would be a piece of Imprudence, for such very little Places as are the Gardens we are here planting, to Counsel any one to plant any considerable number of Trees, both of Stone-fruit and Kernel-fruit, to ripen in one and the same Season of the Months of *August* and *September*, which could not well be without running the hazard of having almost no Fruit at all for the most difficult Seasons: And therefore I have grounded my Expectations upon the *Wall-trees*, to be surely furnished with *Summer-Fruits*, and have design'd the most part of the six first *Pear-trees* for the making a Provision for *Autumn* and *Winter*, two Seasons which we pass but disagreeably without a Desert to brisk them up; And therefore, I think, I have great Reason to say, we ought to labour to provide for them before the rest.

The *Russlet* being thus plac'd, the *Robine* advances, and takes the Eighth place.

The Eighth Dwarf-tree. A First Robine-pear-tree.

This *Pear* is known in different Places, sometimes under the Name of the *Pear* of *Averat*, sometimes under that of the *Miscat-pear* of *August*, &c. and at the Court it self by the name of the *Pear-Royal*, that Name being given it by the Illustrious Father of the Curious, who believ'd, and not without reason, that, as among us, the Title of *King* is at present appropriated to the Person of *Him* that, of all Men, has the most Merit; so the Name of *Royal* among *Pears*, ought to be given to that which appears to have the fewest Defects; and, in Truth, may be look'd upon as an accomplish'd *Pear*. Take here its Picture: It is near about the bigness and shape of a little *Bergamot*, that is to say, between round and flat, its Stalk is pretty long, strait, and sunk pretty hollow into the Pear, and its Crown or Eye is also a little hollow and sunk inwards, its Pulp breaks forth in the Mouth without being hard, and its sugred and perfum'd Juice charms all the World, and particularly the chiefest Prince of the Earth, and with him all the whole *Royal Family*. Its Colour is a yellowish White, and its Skin is gentle; it hardly grows soft at all, which is a very important Quality, and almost peculiar to this only among all the *Summer-pears*: Neither

does

*August* and *September*. The several Names of the *Robine-pear*.

The *Robine-pear* Describ'd and Commended.

does its Excellence terminate in being eaten raw; it is admirable besides in *Pies* and *Com-potes*: It forms a very fair and large *Dwarf-tree*, and thrives well every where, and has no Reproach to fear, except that its Wood is subje& sometimes to the Canker, and its Defects that commonly it is difficult to be brought to bear; but I shall elsewhere give you sufficient good Remedies against those Defects; and there is nothing else but the time of its ripening that gives us any trouble to defend our choice of it to this place, because it comes in, as I have said above, together with the *Russlet-pear*, and the first great *Peaches*. But it has this advantage, That it is not athand to appear in their Company: All this then put together, is it not enough to oblige us to consels, That the *Robine-pear* Merits at least an Eighth Place, without fearing any other *Pear* will be able to make any available opposition against it, unless it be the *Colmar-pear*, for the Month of *February*?

The Seventh and Eighth places of *Dwarf-trees* being so well filled up, the Ninth is demanded not only by every one of the Seven *Pears* which we have already mentioned above, viz. The *Louise-bonne* or good *Louise*, the *Petit-oin*, the *St. Germain*, the *Marchioness*, the *Craffanne*, the *St. Augustin* and the *Colmar*; but also by the *Verte-longue* or *Long-green-pear*, besides which, the *Sucré-vert* or *Sugar-green*, the *Dry Martin*, the *Lansac*, the *Messire-John* and the *Portul*, dare almost presume themselves not altogether unworthy of it. Let us Examine separately the Reasons of the principal *Aspirants* in the same manner as near as we can, as we have done those of them already plac'd. I shall begin with explaining what concerns those new sorts of *Pears*, the *Craffanne*, the *St. Germain*, the *Marchioness*, the *St. Augustin* and the *Colmar*, and then pass on to speak of the *Petit-oin*, the *Louise-bonne* or good *Louise*, the *Verte-longue* or *Long-green-pear*, and the *Lansac*.

The *Craffanne* meets with many Gentlemen that call it the *Bergamot Craffanne*; *Berg-mot*, because of its Pulp; and *Craffanne*, because of its Shape, which looks as if it were squeezed down: But I think it would be more proper for it to bear the Name of the *Flat Butter-pear*, it being pretty much of the Nature and Colour of the *Butter-pear*, though it differ from it in its flat Figure, it is nearest the Shape of the *Messire-John*: There are of this sort some very great, some midling, and some very small *Pears*. The Ground of its Colour is greenish, growing yellow when it is ripe, and almost all over speckled with red Spots: Its Stalk is long, pretty thick, bent and hollow set, like *Apple stalks*: Its Skin is rough, its Pulp extremely tender and Butter-like, though it be not always very fine; and its Juice is as abounding as that of the Famous *Butter-pears*, but that it unhappily adds beyond what they have, a certain kind of biting Sharpness, which is the Cause that among the *Bergamots*, the *Thorn-pears*, the *Petit-oin*, the *Louise-bonne* or good *Louise*, the *Ambrets*, the *Lechasseries*, &c. in whose Company it pretty often appears in the Months of *October* and *November*, it is accus'd to make not an over pleasing Figure, and particularly with those Persons that, loving *Pears* as Nature presents them, seldom care for any Sugar with them: However, because there are often enough found some *Pears* of this Sort without this great Defect of biting Sharpness, as it proves in those growing in a Soil a little fatish and moistish, like that of *Versailles*; one may say, That 'tis not altogether without reason, that it pretends to the place in Dispute; to which, if we add the Qualities of preserving it self a whole Month in perfect mellowness without ever growing pappy; and lastly, of being subject at most but to the common Condition of all Fruits, that is to rottenness, and that but by degrees, it beginning at first in this *Pear*, but at one small part of it, to give notice that it cannot last much longer. These Three last Considerations may reasonably procure it a great number of Protectors.

To look upon a *St. Germain-pear*, being very long and pretty big, and some of them green and a little spotted, some pretty red, and all of them growing very yellow as they ripen, with short, indifferent thick and bending Stalks; one would take it for a very fine *Virgoule-pear*; and those of them that are but small of growth, are something like the *St. Lezin-pears*: This Sort of *Pear* comes almost always in at the same time with the *Virgoules*, *Thorn-pears*, *Ambrets* and *Lechasseries*, though sometimes it comes before them, and sometimes not till after them, which commonly depends upon the Temper and Behaviour of the *Summer* and *Autumn*; and that, as I have elsewhere said, holds true, not only as to these *Pears*, but, in general, in all the fine *Autumn* and *Winter-pears*; and besides, the difference of Stocks on which those sorts are grafted, whether *Free* or *Quince*-stocks; and of Expositions more or less Sunny, and of Soils dry or wet, are of great Influence in this respect, &c.

This *St. Germain-pear*, otherwise called the *Unknown Pear* of the *Fare*, has a very tender Pulp, without any earthy or stony Remains, is of a great Taste, with much Juice, but that Juice has very often a small point of *Lemonish* Sharpness, which pleases some curious People, and displeases some others: I have seen some of them that had little or nothing

The *St. Germain-pear*, its Names and Description.

of that Taste, and some others again which happily had none at all, and were by consequence, better to my Taste; without doubt, the being Grafted on a Quince-stock, and the excessive driness of a Soil, augment this Defect; and therefore we ought to rather to Graft them upon Tree-stocks, and in a Ground where driness does not so much predominate; yet, I will say to its Honour, that this slowish Taste is found only in such Pears of this sort, that because they are worm-eaten, mellow in November, and is seldom met with in those that come not to mellow till the end of December.

The Marchion's  
Pear described.

The *Marchion* or *Marchion's* assumes two different Figures, according to the difference of the Soils or Trees on which it grows: If the Ground be dry, it is pretty like in Bigness and Shape, to a very fine *Blanquet-pear*, or a midling *Boncretien*, and it proves the same upon a *Standard-Tree*; But in Grounds that are fat and moist, and upon a *Dwarf-tree*, there are of them that grow extraordinary great. This *Pear* is of a handsome make; it has a flat Head, a little Eye or Crown sunk inwards, a pretty big Belly and handsomely sloping down towards the Stalk, which is indifferent long, thick, bent downward, and a little hollow set; its Skin is somewhat rough, its Colour is of a green Ground flourished with some flakes of red, as is to be seen in the *Butter-pear*; which Colour, if it change not in ripening, the *Pear* proves very bad, having in that the same Destiny with the *Louise-bonne* or *Good Louise's*, the *Thorn-pears*, *Petit-ains* and *Lanfac's*; this miscarriage comes from the moistness of the Soil, or the too thick and tufted Figure of the *Dwarf-tree* in such Grounds: But when the green of it grows kindly yellow as the Fruit ripens, then the Pulp of it is tender and fine, the Taste pleasing, the Juice sufficiently abundant, and as much sugred as is to be wish'd in a marvellous *Pear*: It's true, it has something of a stony Substance towards the Core, but that sure ought not to hinder it from being look'd upon with some esteem, in the Months of October and November.

The Colmar-  
pear; its Names.

Its Description.

The *Pear* of *Colmar* came to me under that Name, from an illustrious curious Gentleman of *Guien*, and from another Place under the Name of a *Mamma-pear*, and under that of the latter *Bergamot*: And indeed this last Name would better agree to it, than that of *Colmar*; it has very much of the Air of a *Boncretien*, and sometimes of a fair *Bergamot*: Its Head is flat, its Eye or Crown indifferent great, and sunk very hollow, its belly a little thought bigger than the Head, moderately lengthening it self, and very grossly lessening till it comes to the Stalk, which is short, pretty thick and bent downwards. Its Colour is a spotted green like the *Bergamot*, and sometimes a little tinged with red on the side next the Sun: It grows a little yellow when it comes to be mellow, which happens in December and January, and sometimes reaches as far as February and March: Its Skin is gentle and smooth, its Pulp tender, and its Juice very sweet and very sugred; in which you have the Picture of an Excellent *Pear*, but yet it has the same ill Offices to fear from the Quality of the Soil, and of the Seasons with the *Thorn-pear*, the *Louise-bonne* or *Good Louise*, the *Petit ain*, &c. being a little subject to have its Pulp gritty and insipid; besides which, it fears the least blasts of the Autumn Winds, which especially upon Tall-trees easily blow down its Fruit, and hinder it from acquiring that degree of Perfection which naturally it should have. Its just maturity of mellowness is not easy to nick; for though it be yellow, it is not always ripe enough for all that, but after it has appeared yellow for a considerable time, when it yields a little to the Thumb, if gently pinch'd.

The Petit-ain,  
its names,

Its Description  
and Character.

The *Petit-ain*, which some *Angevins*, or People of *Anjou*, name *Bouvar*, others the *Ruffet* of *Anjou*, others *Amadon*; and lastly, others, the *Winter-Marvel*, is a *Pear* of November. It is almost of the bigness and shape of the *Ambreit* or *Leschafferies*. Its Colour is a clear green, a little spotted, and has a small touch of yellow when it is ripe; one would be ready enough to take it for a midling *Bergamot*, but that it has nothing of flatness, but, on the contrary, is very round, has a great Eye or Crown jetting outwards, a small stalk pretty long, a little bending downward, and shallow set, a Skin between rough and soft; its Body is a little uneven, and full of Bunches, its Pulp extremely fine and melting, without any stony or earthy remains, its juice very sweet, very much sugred, and agreeably Perfumed with a smack of Musk; all which confirms to us, That as little as it is in Bulk, it ought to be allowed a Place among good Pears, and be ranked among the first in Fruit-Gardens, though, as I have elsewhere said, it runs the same hazards as the *Thorn-pear*, and other principal Pears of contracting a doughy and insipid Pulp; but in fine, for all that, it may be said, That provided its natural temper be not spoiled by those Things which may be termed the sworn Enemies of all good Fruits, which are too much moisture and too little heat; there cannot, during two Months space, be seen a better little *Pear* than this in its perfect Maturity.

The

The *Louise Bonne*, or *Good Louise*, is of a shape pretty like that of St. the *German Pear*, The *Louise-bonne*, or *Good Louise-Pear* Described.  
and even of the *Verte-Longue*, or *Long-green-Pear* of Autumn; but that it is not quite so narrow pointed; some of them are much bigger and longer than others, but the least are best; its stalk is very short, a little fleshy, and bent downwards; its Eye or Crown is small and even with the body; its skin very gentle and smooth, its colour of a speckled greenish, growing whitish as it ripens, which happens not to the bigger of them: The First Mark then of its ripeness is that whiteness, tho that be not sufficient alone, but it must yield to the thumb when it is gently pinched towards the Crown: It's other good qualities consist in, that it is marvellously fruitful, and supplies almost the two whole Months of November and December; that its Pulp is extremely tender, and full of Juice, which Juice is pretty sweet, and of a rich Taste; in that it grows not soft and pappy, as most other Pears do; and above all, in that it very much pleases his Majesty; but that is to be understood, when it has all the goodness it is capable of; for it seems to be like Children that are born with good inclinations, of whom it may be truly said, that if they be well Educated, those good Qualities improve in time to perfection, but if ill, they degenerate and are corrupted; in the same manner, wet grounds makes this *Pear* very big, but at the same time very bad withal, giving it a green crude and wildish Taste, and a very peculiar sort of pulp not otherwise to be described, but by saying it is almost like congealed Oyl, it being true enough, that this pulp makes no continuous body, its parts hanging no more together, than so many grains of honey, or of wetted sand; and but in recompence, the full Air and Standard Trees are very favourable to it, and would be more, if it stuck but a little faster than it does, to its Stalk: From whence 'tis easy to conclude that such as we see good of them, are of the growth of dry Soils, or at least of such other grounds as have been very carefully cultivated.

The *Verte-Long*, or *Long Green*, otherwise called the *Mouille-Bouche*, or *Mouth-Moistner* The *Verte-Longue* or *Long-Green-Pear*. Its Names.  
of Autumn, is one of those Ancient Pears that all the World knows; of the two Names it bears, the first gives the true Description of its outside, and the other denotes its inward goodness; it has a great many Friends, and a great many Enemies, and those which are its Adversaries object against it, that it often comes unseasonably to mix it self in the company of the *Lateward-Peaches*, and among the *Butter-Pears*, that is to say, among excellent Pears endued with such charming Qualities that are able to Eclipse all that the *Verte-Longue* can shew to recommend it self, and even to persuade people they may very well be without it; they likewise find fault with it for being too apt to grow soft, and because unless it grow in a ground that's Dry and Sweet, it commonly is in danger of growing doughy, or at least of having but a faint and insipid Juice.

I confess indeed, That those are very powerful Reproaches, if they were altogether true, and inseparably affixed to this *Pear*; but we can answer, First, That we suppose in this place the ground to be favourable enough to produce good ones; in the second place we say, that the time of its Ripening is commonly about the middle of September, and that then the *Butter-Pears* are ordinarily gone and past, so that in that time, it often makes an agreeable interlude in comfort with the last ripe *Peaches*, and particularly with the *Muscat-Grapes*, in expectation of the Ripening of the *Bergamot* and *Petit-Oin-Pears*, which ought not to be long behind; for otherwise, we are reduced to make a shift with nothing else perhaps, but *Messire Johns*, *Vine-Pear*, *Lanfac* and *Rousselm*, &c. Which are all Pears that ought to hide themselves so long as any *Verte-Longue*, or *Long-Green* are in being.

On the other side, if we please to do it the Justice to consider the great quantity, the Sweetness and Perfume of its Juice, with the delicacy and fineness of its Pulp, we cannot but confess we have no *Pear* that can dispute with it in those Qualities; nay, further I dare affirm, that it exceeds most other Pears in that wonderful abundance of Fruit, which as it were to confound its Enemies, it ordinarily presents us every year upon our *Garden-Theater*.

It is very certain, if it be never so little helped out with Sugar, as it is a *Pear* without any appearance of any Stony or Earthy Matter, and that has hardly any more skin neither than good *Peaches*, we shall find so many Reasons for it, and so few against it, that in Fine, in spite of all Objections, it will make it self be considered, as a very important Fruit in the time of its perfect Maturity.

The *Dolphin*, or *Lanfac Pear*, called in some places, the *Lichefrion*, or *Lick-Sweet* of Au- The *Lanfac-Pear*. Its Names.  
tumn, has indeed some fine days, and some very foul ones: Its ordinary bigness is about its Description.  
that of *Bergamot*, and none but the little ones of this sort are good; its shape is between Round and Flat towards the Head, and a little length towards the Stalk; its Colour is a pale Yellow; its Juice sugred, and a little perfumed; its Skin is smooth; its Pulp Yellowish, Tender and Melting; its Eye or Crown Bigg, and even with the Body; its

Stalk

Stalk strait, and pretty Long, Thick and Fleehy: And I have met with some of them that to my Taste, were almost perfectly good *Pears*; but as I said just now, that happens only when they are but of a middling bigness, and especially when their skin is almost all over covered, as I may say, with a Coat of *Ruffet* or *Cinnamon* Colour, which often happens to those that grow in dry grounds, or upon Tall Trees; for in any other Soil, or on any other sort of Tree, this sort of *Pear* proves Doughtie, Insipid, and in a Word, one of the most imperfect *Pears* in Nature; which proves but too true in those that growing in Cold and Moist Soils, or particularly upon tufted and bushy *Dwarf-trees*, have acquired the bigness of a fair *Messire-John*, and a whitish green colour; from this then, it follows, that the *Lanfac* is like the most part of the good *Pears* of which we have spoken, that is to say, That it succeeds not indeed every where, but yet is in an entire good disposition to do well, if it be happily planted; and therefore might well enough deserve a tolerable good place in a small Garden, if particularly it Ripened in any other Season but just at the beginning of November, which is so well stored with other *Pears* of the first Order; upon which consideration, we shall defer placing it, till we come to plant bigger Gardens;

But as to the seven other preceding ones, that as one may say, make an admirable consort of good Fruits, during the Months of November, December and January, having to second them, the *Ambrets*, the *Lefchasseries*, the *Thorn-pears*, and above all, the *Virgouless*, which seems to make in this body of *Musick*, a kind of continual *Bass*, I say, in respect to those seven preceding *Pears*, I cannot deny but I am much puzzled how to decide in what Order they ought to have admission into our Gardens, they are all so very good; yet if I had some of those good Soils which offend neither in too much driness nor moisture, I would give my Voice to the *Petit-Oin* for the ninth place, to the *Crasane*, for the Tenth, the *St. Germain*, for the Eleventh, the *Colmar*, for the Twelfth, the *Louise-bonne*, or *Good Louise*, for the Thirteenth, the *Verte-Longue*, or *Long-Green*, for the Fourteenth, and to the *Marquise*, or *Marchioness*, for the Fifteenth.

The Ninth Dwarf-tree. A First Petit-Oin. A.  
The Tenth Dwarf-tree. A First Crasane. B.  
The Eleventh Dwarf-tree. A First St. Germain. C.  
The Twelfth Dwarf-tree. A First Colmar. D.  
The Thirteenth Dwarf-tree. A First Louise-bonne. E.  
The Fourteenth Dwarf-tree. A First Verte-Longue. F.  
The Fifteenth Dwarf-tree. A First Marchioness. G.

A.  
November and  
December.  
B.  
November.  
C.  
November, De-  
cember and Ja-  
nuary.  
D.  
November, De-  
cember, January  
and February.  
E.  
November and  
December.  
F.  
Middle-October.  
G.  
October.

Directions how  
to accommodate  
our ground to all  
sorts of Trees.

And that which is here to be Remarked by all the world (for ordinarily men are not Masters of such happy Soils) is, That of these seven sorts of *Pears*, there are two that are much afraid of a very dry ground, and require one that is moderately Moist, and they are the *Crasane*, and the *St. Germain*; but that, as for the other five sorts, they are of a quite opposite Temper, and succeed wonderfully well, where the two others miscarry; and again in their turn, become Objects of our pity, or rather of our Horrour and Aversion, in moist Soils, unless our industry and cultivation be very skillfully applied to correct that defect.

You may be pleased to take Notice, what for that purpose I have practised with good success enough in the Kings Kitchen-Garden; The Situation of the place which is naturally Marly, and the Temper of the Earth which is cold and gross, put me on upon making many Experiments, as I have said elsewhere; for I was absolutely minded to have of all those sorts of *Pears*, that really had any thing of worth to make them desirable, and for that effect, striving particularly to content the palate of the Master I have the honour to serve, I endeavoured to lay in there a proportion of Molds of all sorts of Constitutions, to give those *Pears* the means to attain their due perfection: And therefore I raised a part of my ground into double Slopes and Ridges with convenient Furrows and Gutters between, to drain them, and consequently to dry them from all superfluous Moisture; and planted upon the most Elevated parts of these Ridges or Slopes, as well in form of *Dwarf*, or *Standard-trees*, such sorts of Fruits that could the least endure humidity, and placed those others that find their Account better in a Situation not so dry, in other parts which I had not raised so high.

The Counsel then that I take the Liberty to give to all curious persons, is, that if their little Gardens offend in humidity, and they be minded to correct that Fault in them, they would imitate as far as they can in due proportion, what I have practised in a very great one; and on the other side, that they who have only a very dry Soil, if they please to believe me, would plant but few *Crasane*, or *St. Germain-Pear-trees*, unless it be upon

free-

free-stocks, for fear otherwise, of a little biting sharpness in the first, and a little sourness in the second (tho both those Tastes are easily allayed with a little Sugar, or else vanish when those Fruits come to their full Ripeness) and would rather fix upon the five other sorts, which will amply recompense them for all their pains and care.

But those again who have ground that is moderately Moist, will do well to give some good places to some *Dwarf-trees* of the *Crasane* and *St. Germain-Pear* grafted, either upon free or *Quince-stocks*, and at the same time, to reject the *Louise-bonne*, or *Good-Louise*, the *Petit-Oin*, and the *Marchioness-pear*, unless they plant Standard Trees of them, or take great care that nothing cover them from the heat of the Sun.

The short Eating *Pears*, which were formerly in such great Vogue in all Gardens, are so fit from seeing themselves in favour at this day, that now no esteem at all is made neither of the *Messire-Johns*, nor *Dry-Martins*, nor *Pottals*, nor *Buideries*, and if they appear upon Noble Tables, it is not never to return any more, or to give any pleasure to the Taste; but only with delight at most, to help towards a solid construction of *Fruit-Pyramids* there used for *Statue* or *Shew*. Yet notwithstanding all this, these kinds of *Pears* are not without some Patrons; and therefore as they are sensible they have still as much worth as ever they had formerly, they demand to be admitted to have the fair play to shew it with the best advantage to the world; to endeavour what they can to retrieve their credit, and to be suffered at least to follow next those fifteen choice preceding *Pears* which have had all the honour of the First Gardens.

The Excellency of the *Dry-Martin*, which is sometimes called the *Dry-Martin* of *Cham-pagne*, to distinguish it from another that is called the *Dry-Martin* of *Burgundy*, does not consist in its being of the bigness and shape of a *Ruffet*, so that in some places 'tis called the *Winter Ruffet* (tho there be another *Pear* that having no other Name but that; takes it very ill the *Dry Martin* should so enviously usurp the Title from it.) Neither does it's Merit consist in that being tinged with an *Isabella* Red on the one side, and a very High Coloured Red on the other, it extremely pleases the Eyes, for that would not be enough to carry the Prize in a contestation about the goodness of Fruits; but it lies first, in that it has a pulp that eats short, and that is pretty fine, together with a sugred Juice with a little smack of perfume; and in the second place, in that it has the advantage to be good to Eat with its skin and all, as is the true *Ruffet* or *Ruffet*, nay, and to be eaten too as soon almost as 'tis gathered; Thirdly, in that it is a Fruit of Great increase, and sometimes keeps pretty long, so that it is of some use in the Month of November; and lastly, that its Plant forms a very fine *Dwarf-tree*, and produces well in all sorts of Figures of Trees, and in all sorts of Grounds: And therefore I cannot but have some esteem for this *Pear*, and accordingly shall admit it to appear when we shall come to model the Plantations of Great Gardens, and especially when we come to finish that of a hundred Trees; But in little ones it durst not presume to shew it self among so many other excellent tender *Pears* that come in as well as that in the Month of November.

As for the *Messire-John*, whether it be *White* or *Grey* (for they are both but the same sort) who is there that knows it not? It has not in Truth the Gift to please all the world: For those that like it not find Fault with its stoniness to which it is very Subject, and Object against its rough and gross Pulp, which by this means it contracts, and that, with but too much Reason; yet methinks they lash out a little too far in their contempt of it; when they say, 'tis but a *Pear* for a *Curate*, a *Burgess*, or a *Serving-man*, or at most, a *Pear* for the *Vulgar people*; but whatsoever they are pleased to say, they cannot but confess however, in its justification, that as much as it dreads and abhors Grounds that are too dry, and Summers too burning hot, which make it small and despicable; so much it desires and delights in a Soil that is moderately moist, either by Nature, or by Art, that is to say Moist, by the help of Watering; and so accommodated, in a Summer that is pretty mild, it infallibly prospers so as to grow a fair large *Pear*, and of great increase, thriving almost as well upon a *Free*, as upon a *Quince-stock*, and in the Form of a *Standard-tree*, as of a *Dwarf*: The shape of this *Pear* is flat, and its Skin is a little rough in those that are *Grey*, but in those that are *White*, it is a little gentler, and in a short *John* defribed. Eating Pulp, it yields a very sugred Juice, with a middling quantity of stony substance; and it may even be praised for so well nipping the time of its Ripening; so that, in fine, to avoid the confusion it might suffer if it should be so bold as to intrude into the Company of the tender and *Butter-pears*, to which it will not presume to compare it self, it stays just till the *Ruffets*, the *Butter-pears*, and the *Verte-longue*, or *Long-green-pears* are past, and comes in a little before the middle of October, as 'twere only to amuse the curious, whilst the *Marchioness*, *Louise-bonne*, or *Good Louise* and *Petit-Oin* are advancing towards their Maturity, and especially whilst the *Bergamot* is preparing to shew her self

O

with

with all the splendour and agreeableness that becomes the *Queen of Pears*: If this *Messire-John* had any better Reasons to produce, it would not fail to alledge them with the utmost advantage it could; and it desires we should count it for one Plea in its favour, that it is disposed well enough to form a goodly *Dwarf-tree*, and that its Fruit makes an Indifferent fine Figure in the *Delects* of the *Vacation Season*.

The *Portal-pear*.

It would not be just, if after we have spoken of the *Messire-John*, we should not say something too of the *Portal*, which is a *Pear* so famous in one of the greatest Provinces in the Kingdom, that is to say of *Poitou*, a Province full of Gentry of very delicate Palats, and very curious in Matters of Gardening; such a proceeding would be publicly to reflect on them, as if they were grossly mistaken in the Esteem they make of their *Portal-pear*; or, I should put my self in danger of being accused by them of not knowing it well enough, if I should prefer many other *Pears* before it; but for all that, to speak of it with all possible sincerity, I must needs say, I know no *Pear* that has a greater number of Enemies than this, whose aversion is grounded upon all those Faults that discredit it in a great many places; as for Example, these that follow, *Viz.* That it is somewhat hard, stony and full of earthy and gritty substance; that it seldom comes to any good any where else but in *Poitou*, and especially in and about the City of *Poitiers*; that it seldom ever begins to be good to Eat, till it begins to have some speck of Rottenness, which cannot be said of any other Fruit; and lastly, that it is much of the Nature of *Musk-Melons*, that is to say, that for one *Pear* of this sort, that proves excellent, there are very many that are very far from it, besides that its *Dwarf-trees* are ordinarily of a very mean Beauty.

Its Description and good Qualities.

That which may be answered in its defence, is, That notwithstanding all these Reproaches, it cannot be disputed but that it has some good Qualities which are capable to procure it some consideration, when it has all the Goodness which belongs to it, and which ordinarily is not found but in such *Pears* of it as are of the product of *Trees* grafted upon *Free-stocks*: It's sugred Juice its agreeable perfume, its bigness, its colour and its shape, which render it almost like a brown and very flat *Messire-John*, and its mellowing in the Months of *January* and *February*, &c. These Reasons might methinks sweeten peoples minds towards the *Portal-pear*, and induce them to consent I should give it a good place, especially considering withal, that, tho commonly it is better in *Poitou* than any where else, it is however true, that we have pretty often some in this Country that hardly yield to them of *Poitou* in goodness; but that being something rare, I think it best for our purpose to leave the Gentlemen *Poitouins* in full Liberty to plant themselves as many *Trees* as they please, of their so much beloved *Pear*, and to counsel us *Querists* every where else, to prefer many other *Pears* before them.

I have already placed fifteen sorts of *Pear-trees*, I shall next speak of those others that I still esteem beyond the *Portal*, to fill up the rest of the five and twenty, or thirty first places in Gardens of a middling extent.

The *St. Augustin-Pear*.

You are without doubt surpris'd, that having above named in passing, the *St. Augustin* among the principal *Pears*, I have since made no more mention of it in order to the placing it: The Truth of it is, this omission was made, not out of any forgetfulness, but only because of the time of its mellowing, which hapning together with so many others towards the end of *December* made me reckon this ill timing its season for a kind of Fault. I had formerly seen some under this Name, and under that of *Pears* of *Pisa*, which I made no account of, because of their smallness, and particularly because of the hardness and dryness of their Pulp, tho a little Perfumed; but since that I have seen other very fair ones which I believe different from the former, and found them very good: They are of much about the bigness and shape of a fair *Vergulde-pear*, that is to say, they are indifferent long, and pretty big, having their belly and also their lower part round, but with some diminution of bigness as well on that side, as towards the Stalk; I should tell you, this Stalk is rather long than short, and that it appears strait in some, and bent downwards in others, and yet not hollow set in the part out of which it comes; its Eye or Crown is pretty big, and somewhat sunk inwards; its colour is a fair Lemon-yellow, a little speckled, with a little bluish of Red on that side next the Sun: The Pulp of it is tender, without being buttery, and furnishes more Juice in the Mouth than it promised in cutting with the Knife; some of these *Pears* have a little smack of Sowiness in their Taste, which is so far from being displeasing, that it serves rather to give it the greater relish; and some others of them have hardly any at all of it; I believe this Description sufficient to direct you how to know this *Pear*, which I assuredly esteem, but should prize it much more, if, as I was made to hope; it could be brought to keep till the Months of *February* and *March*: However, it may well deserve the sixteenth place, which I give it.

The

The Sixteenth Dwarf-tree. A First *St. Austlin*.

The Seventeenth Dwarf-tree. A First *Messire-John*. A.

The Eighteenth Dwarf-tree. A Second *Butter-pear*. B.

The End of *December*.  
A.  
Mid-*October*.  
B.  
*September* and *October*.

This done, I thought I could not do better than to give the Seventeenth place to a first *Messire-John*; it being a pretty good *Pear* when it is large and full ripe; and the Eighteenth place, to a second *Butter-pear*, because in a Garden of Eighteen *Dwarf-trees*, it seems to me, that 'twould be too little to have but one *Dwarf-tree* of that sort.

And now here follows all at once a crowd of *Pears* of three several Seasons, which have every one their Partisans to demand in their favour the Nineteenth place in a Garden of Nineteen *Trees*: *Viz.* The little *Muscat*, or *Musk-pear*, which is one of the good *Summer-pears*, and comes in in the beginning of *July*; the *Cuisse-Madame*, or *Lady-thigh*; the *Great Blanquet*, or *White-pear*, and the lesser one; and the *Long-tail'd Blanquet*, and the *Skinless Pear*, the *Muscat Robert*, the *Gourmandine*, or *Greedy guts Pear*, the *Bourdon*, the *Amuree*, the *Hasty Russet*, or *Russetin*, the *Finor* and the *Cypri pear*, &c. Which all follow the little *Muscat* hard at the heels: The *Orange-green-pear*, for the End of *July*. The *Musked Orange-pear*, the *Summer Thorn-pear*, the *Summer Bergamot*, and the *Pear d'Epargne*, or *Reserve-pear*, for the middle of *August*; the *Oignonnet*, or *Onionet-pear*, the *Fondante*, or melting-pear of *Brest*, the *Perfume-pear*, the *Brutte-bonne*, or *Chew-good-pear*, the two sorts of *Summer Boncretiens*, and the *Cassiolette*, for the End of the same Month; the *Salvator*, the *English-pear*, the *Reville*, the *Cat-pear* of the Country of *Foret*, and the *Flowery-Muscat*, in *September*, the *Brown-Orange-pear*, the *Russelm*, the *Fille-Dieu*, or *Daughter of God-pear*, the *Sugar-green-pear*, and the *Besi de la motte*, in the Month of *October* and *November*, as also the *Round-Milan*, otherwise called the *Winter-Milan-pear*, the *Arch-Duke*, the *Boncretien Butter-pear*, the *Elbogenit*, and the *Winter Messire-John*, the *Pastourelle*, for *November* and *December*; the *Rouville*, the *Great Musk-pear*, the *Chaumontel*, and the *Winter-Russet*, for *January* and *February*, the *St. Lexin*, and the *Bugi*, for the Months of *March* and *April*, the *Winter-Lemon-pear*, otherwise called the *Lucina*, is not without having raised some affection towards it in some curious persons that love Fruits of a Perfumed Relish: The *Vine-pear* in *October*, boasts it self to be so good in some places, that we cannot, as it believes, without the greatest injustice in the World refuse it admittance at least among the Nineteen, and the *Spanish Boncretien*, has it not, as one may say, some Adorers of its Beauty, and some of its Goodness? Nay, and the very *Besidy*, the *Carmelite*, the *Bernardiere*, the *Gigole*, the *Cadet pear*, the *Double crowned-pear*, and the *Double-flowered pear* could almost find in their Hearts too, to present their Petitions for Precedence before all those we have just now named: And the *Admiral*, the *Rose-pear*, the *Malra-pear*, the *Maudlin-pear*, the *Cathart-pear*, the *Black Sucrine* or *Black Sugred-pear*, the *Vilaine of Anjou*, the *Cassios rolat*, or *Rose Pebble pear*, the *Thick tail'd pear*, the *Besie de Caissy*, and some others like them, have indeed some Goodness and some Reputation in some certain parts: But I do not believe they have Vanity enough to demand I should speak of them so soon, they will doubtless be contented to appear in the crowd of Fruits, and will without jealousy see many other *Pears* make a great Figure every where, whilst with little noise a part of them shall be allowed their place in some by-part in great Gardens, and shall serve at least to make there some tolerable variety.

The Pretensions of this last Troop of *Pears*, have indeed a while diverted me from the choice I design to make for our Nineteenth place, but have not made me change it; for I am now going to give the Honour of it to those for which, of all *Pears*, I think my self most oblig'd in this place to declare.

And that is not as yet, for the little *Muscat* or *Musked-pear*, though seriously I infinitely esteem it, and it be really a very agreeable *Pear*, especially when it is pretty large, and it has time to grow yellow, that is, to ripen well. It comes alone, and almost the first of all; it is that which, as I may say, opens the Theater of good Fruits; all which Considerations would be strong enough to gain me in its Favour, but that 'tis too small a *Pear* to take up so soon to great and precious a Place, and especially in the Figure of a *Dwarf-tree*, in which, no more than the *Bergamot*, it seldom meets with any success: It requires, without doubt, to be planted rather against Walls, and accordingly I shall take care to place it well in that Situation, when I shall come to treat of those Fruits that are to garnish our Walls.

The Great *Blanquet-pear*, which is the true *Musked Blanquet*, and the *Cuisse-Madame* or *Lady thigh pear*, would have reason to be offended, if the *Muscat* should precede them, at least in the Form of a *Dwarf-tree*, though doubtless, and without Contradiction, they both

The Little *Muscat-pear*.  
Its Praise.

ought to give place to it, in that of a *Wall-tree*. And therefore I think 'tis most proper to give the Nineteenth place here to the *Cuisse-Madam* or *Lady-thigh*, and the Twentieth to the *Great Blanquet*, rather than to any other.

A. The Nineteenth Dwarf-tree. A First Cuisse Madam, or Lady-thigh. A.  
The Twentieth Dwarf-tree. A First Great Blanquet. B.

The *Cuisse-Madam* or *Lady thigh*, is a kind of *Ruffete*, its shape and colour being agreeable to that sort of *Pear*; its Pulp is between short and tender, accompanied with an indifferently great abundance of Juice, having a small relish of Musk, and being very pleasant when it is full ripe; to which may be added another very favourable reason both for this *Pear* and the *Great Blanquet*; which is, that they both come to cheer us, whilst the *Peaches* are a coming; and that they are the first *Pears* that are reasonably large and good, that we have in the Beginning of *July*. Their Plants form very fine *Dwarf-trees*, and the only fault I find in them is, that they are very hard to be brought to bear; but yet from the very first Moment they have once begun, they produce to a wonder.

The *Great Blanquet*, or *White-pear*, is very different from that which is simply called the *Blanquet*, or *little Blanquet-pear*, and is more forward in ripening by Fifteen Days; it is bigger and not so handsomely shaped for a *Pear* as the lesser one; it colours a little upon a *Dwarf tree*, and has a very short thick stalk and a little hollow set: Its Wood, which is small, and its Leaf, are pretty like those of the *Cuisse-Madam*, or *Lady-thigh*, whereas the Wood of the *Little Blanquet* is ordinarily very thick and pretty short; the *Great Blanquet* is likewise very different from the *Long-tail'd Blanquet*, which is a handsome *Pear*, whose Crown is pretty big and standing out; its belly round and pretty long towards the stalk, which is a little fleshy and pretty long, and bending downwards; its Skin very smooth, white, and sometimes a little coloured on the Sunny side; its Pulp is between short and tender, very fine, and very full of Juice, which is sugred and very pleasant. It has the faults of most part of the *Summer pears*, which are to have something of stony or earthy Relicks, and to become doughy when they are let to grow too ripe; this *Pear*, no more than the *Great Blanquet* are not yet very common, though they well deserve to be so: They succeed well, whether it be on *Dwarf* or *Standard trees*. I shall not be long before I place this *Long-tail'd Blanquet*. The white Colour which appears in the Skin of the three sorts of *Pears*, has occasioned their being called *Blanquets* or *Blanched pears*, which is the Name they bear.

The *Cassiole* having just now seen the *Cuisse-Madam*, and the *Great Blanquet*, or *White-pear*, pass before it, murmurs in earnest, because it is not preferred before them. It is a longish and greyish *Pear*, which is hardly inferior to any thing to the *Robine-pear*; neither in its Pulp, nor in its Juice, nor in its whole Excellence taken altogether, save only that is apt to grow soft, which happens not to the *Robine-pear*, and therefore it might well dispute these two last places, if it were as happy as the *Cuisse Madam*, or *Lady-thighs*, and *Blanquets* or *White Musk'd-pears*, in well timing its Maturity; but it comes not in till about the middle of *August*, that is to say, with the *Robine*, and near about the beginning of the principal *Peaches*, and in the prime of the Season of *Figs*, and of the best *Plums*, which we have by the means of Walls of Inclosure, which is, to come in too good company to participate so soon in the first honours of small Gardens, and therefore I defer the placing of it yet for some further time.

It is visible enough, that in this distribution of Places, I act as 'twere the part of a *Master of Ceremonies*, who for the common good, aims particularly to order things so, that if in every season of the year we cannot have an abundance of good fruits, we may have at least a competent and reasonable quantity of them in proportion to the extent and quantity of Ground in the Garden every one has, and particularly in proportion to the assistance which the *Wall-trees* should contribute for their part, upon which I count, and 'tis certain that had it not been for such prospects as these, I had already placed the *Cassiole*, and the *Musk'd Summer Boncretion*, &c. That which I intend then at present, is so exactly well to regulate and proportion all good fruits that every one of them in its rank, may have opportunity to satisfy the obligation that seems to have been imposed upon them all, not only to give pleasure to man, but above all, to contribute to the preservation of his health.

And methinks we have appearance enough to persuade us, there is such an obligation laid on them: For in effect, it is not visible, in that Nature furnishes us more or less of fruits according as we are more or less attacked by external heat, which would otherwise be powerful enough to offend us? This is a Sovereign Remedy, and a Refreshment ready prepared, which she presents us every year in the Critical time of our need: 'Tis for that reason, that in the Month of *August*, that is to say, in the time of the most formidable heats of the *Dog-days*, we have such store of *Musk-melons*, *Figs*, *Peaches*, *Plums*, and even of *Pears* too;

We

We see likewise that at the arrival of the rigorous cold, which ordinarily domineers from *Mid-November*, till *February* and *March*, we all finding our selves more sensible of the first on-set of the Frosts, are thereby constrained to approach so much the nearer the Fire, to defend our selves from them.

That external foreign heat so suddenly taken in, might without doubt so immoderately augment that which we have from Nature, that great Infirmities might from thence happen to us. But that this good Mother out of her ordinary Wisdom seems to have provided against them, by giving us precisely for that time, an admirable Quantity of tender Fruits, that is to say, of *Bergamos pears*, *Petit-oins*, *Craffames*, *Louise-bonnes* or *Good-Louises*, *Lechasseries*, *Ambrès*, *Virgoules*, *Thorn-pears*, *St. Germain's*, *Colmars*, *St. Augustins*, and intermixing with them even some of those short-eating and musked *Pears*, which are no bad Fruit, of which I have above spoken, as *Amadois*, *Great Musk-pears*, *Dry Martins* and *Portals*, besides all the *Apples*, as *Calvilles*, *Pepins*, *Fenouillet* or *Femel-apples*, *Cour-pend's* or *Short-stalk'd Apples*, &c. And we see the number of these divine Antidotes diminishes gradually, as we cease to have so great a necessity for them; that is, I mean as the great Cold approaches, which, if I may be so bold to say it, appears to me, to be the common Enemy of Mankind, and which particularly at the time that I am labouring most for the Matter I treat of, most Torments and Afflicts me.

'Tis not my part, nor yet is this a proper place to declaim here against this Cold; but if any advantage might redound to us by so doing, without doubt considering that it equally incommodes me every where, where-ever I meet with it, whether in my Body or my slender wit, or whether more particularly in our Gardens, and, above all, in regard of our Novelties. There should be nothing that I would not say or do, to banish a good part of it out of our Climates: For, humanly speaking, I have no kindness at all for the Cold, unless it be for some Icicles and a little Snow, which are the Relicks we have of it in its absence, and which we take great care to shut up in the close Prisons of our Ice-houses; they being as it seems a sort of Criminals which have need of the Correction of a long Imprisonment, before they can be brought to a temper to be made serviceable for any good; And, in effect, there is a time when the Remains of those Persecutors of Men and Gardens, approve themselves to be very useful; for, in fine, during the troublesome heats of *Summer*, they bear the most delicious part in the Drink of Noble Persons. However, would to God, that without experimenting the Rigor of the *Winters* our selves, we could have Ice brought to us from the *North*, as we have *Olives*, *Oranges*, and so many other good Things from hot Countries.

I proceed all along according to the Design I proposed to my self, which is to contrive, as near as 'tis possible, that we may have in every Garden at least some one kind of good Fruit of every Season, and that from the Moment we begin to have any, there may be no discontinuation or interval till the return of Fruits again the next Year. We have the *Cuisse-Madam*, or *Lady-thigh*, about the middle of *July*, we may join to it for the One and Twentieth place, the *Musk'd Bourdon*, or rather the *Muscat Robert*, which makes the more agreeable *Dwarf-tree* of the two.

The One and Twentieth Dwarf-tree. A First Muscat-Robert, otherwise called the Queen-pear, The middle of July.  
the Amber-pear, the Maiden of Xantoigne, &c.

For in other Things, their Merit is in a manner equal, as for their tender Pulp, and Juice indifferently Musk'd: They ripen both about mid-*July*, but the *Muscat-Robert* begins first. We shall stay a little longer yet before we place the *Bourdon*, and the *Little-Blanquet* or *White-pear*, which follow pretty close after them, and sometimes accompany them. This *Muscat-Robert* furnishes us almost till the time of the coming in of the *Musk'd Boncretion*, which is about the End of the Month; it is a very handsome *Pear*, having a pretty tender Pulp, and very much sugred: It is about the bigness of a *Ruffete*, having hardly any other Faults than that which is common to most of the *Summer-pears*, which is, to have a little stony or earthy Substance, and to last but a little while; but in recompence, it produces a great increase.

The Two and Twentieth place would not be very ill filled up by the *Vine-pear*, or *Danfel*, or *Gentlewoman-pear*, in some places improperly called the *Petit-oin*. It is grey, reddish, round and pretty big; it has an extream long Stalk, and ripens towards the middle of *October*, which is the *Vacation Season*, that is to say, the Time in which the Country is most frequented, and when we have most need of Fruits to entertain Company withal: Its Pulp indeed is not hard, but to speak properly, 'tis neither of the *Class* of the *Buttery-pears*, nor of that of the tender ones, and yet less of that of the *Short-eating Pears*, but

but rather makes a particular *Clafs* by it ſelf, which conſiſts in a kind of fatthiſh and glewy Pulp, and often doughy; over and above which, its merit is infinitely obſcured by meeting with the *Butter-pears*, *Verte-longues* or *Long-green-pears*, *Bergamots*, *Sugar-greens*, *Petit-oin*, *Lanſacts*, *Marchioneffes*, *Craſſanes*, &c. And therefore I will not place it ſo ſoon, but will ſtay to place it among the *Standard-trees*. In the mean while, let us give the *Twenty-second Place* to a *Second Verte-longue*, or *Long-green-pear*, which doubtleſs is much more to be valued than the *Vine-pear*.

*The Twenty-second Dwarf-tree. A Second Verte-longue, or Long-green-pear.*

The *Skinleſs pear* might well diſpute this *Twenty-second Place* with the *Verte-longue*, or *Long-green*, but however becauſe this latter is ſo good a *Pear* in the *Vacation Seafon*, I will leave it to that, and let its Competitor follow it in the next place after.

Mid-July.

*The Twenty-third Dwarf-tree. A Fiſt Skinleſs-pears.*

The *Skinleſs-pear*, its Names and Deſcription.

Which is otherwiſe named the *Guine flower*, and alſo the *Hasty Ruſſelet*, becauſe of ſome Reſemblance it has with the *Ruſſelet* in its longth Figure, and riſes Colour: It is a very pretty *Pear*, and eſpecially towards the *Twentieth of July*, to keep Company with the *Longtail'd Blanquet* or *White-pear*: It has a ſweet Juice without any mixture of any roſie or ſour Taſte, and has a tender Pulp without any ſtony or gritty Relicks, all which ought to be enough to procure your approbation of the Rank I give it, and which I ſhould have given to a *Musked Summer Boncretien*, if it came in in the ſame Seafon as this does, that is to ſay, a little before *Peaches*.

To finiſh the two dozen of *Dwarf-trees*, I give the *Twenty-fourth Place* to a *Second Winter-Boncretien*.

*The Twenty-fourth Dwarf-tree. A Second Winter Boncretien.*

I ſhould never have done, and, contrary to my Intention, I ſhould tire all the World if I ſhould ſtand ſo long a deciding the Conteſtations of the other *Pears* that are in uſe in *Fruit-Gardens*, as I have done upon the occaſion of the *Four* and *twenty* preceding ones: They which ſtill remain behind are of no ſuch great Merit, to induce me to make a formal Panegyrick of them, nor particularly to expreſs the Reaſons they may have to diſpute with their Companions. And I do not think it neceſſary, as I think I have told you elſewhere, for a well-contrived Garden, to have at leaſt one Tree of every one of thoſe ſorts that are but reaſonably good; but my Judgment is, there ſhould be rather ſo many the more Trees of thoſe that are aſſuredly Excellent. I know well enough, That we have more ſorts of pretty good *Pears*, than I have here placed; and accordingly as the Gardens I treat of, ſhall grow more ſpacious, I will not fail to place them ſome in other kinds.

However, at leaſt, thus far I may ſay, that without having in our little Gardens, one only bad ſort of *Pears*, we can boaſt that there are to be found One and twenty of the beſt ſorts that are known, though there be in all but *Four* and *Twenty Dwarf-pear-trees*.

I ſpeak not yet of thoſe which are to be planted againſt Walls. And I have ſet down the Order of the Ripening and Mellowing of theſe Fruits, not only by ſpecifying the *Seafons*, but alſo by particularizing every Month of thoſe *Seafons*. There are Six Trees for the *Summer*, which are, one *Cuiſſe-Madam* or *Lady-Thigh*, one Great *Musked Blanquet* or *White-pear*, one *Muscat Robert*, one *Skinleſs-pear*, one *Robine*, and one *Ruſſelet* or *Ruſſetin*; Nine for the *Autumn*, in ſeven kinds, which are, two *Verte-longues* or *Long-green-pears*, two *Butter-pears*, one *Craſſane*, one *Meſſire-John*, one *Marchioneſs*, one *Louiſe-bonne* or *Good Louiſe*, and one *Petit-oin*: And Nine for *Winter*, in Eight Kinds. This *Winter Seafon*, beſides a part of the *Autumnal-pears*, of which it has often the Advantage to make its Profit, glories very much in having one *Winter Thorn-pear*, one *St. Germain*, one *Virgoulee*, one *Leſchallerie*, one *Ambret*, one *Colmar*, one *St. Auguſtin* and two *Boncretien-trees*, being all *Pears* of a Maturity much further extended than that of the other *Seafons*; which if they be not Super excellent, yet we ought to comfort our ſelves and be content, ſince, among all the great number the Earth brings forth to us, and that are come to our Knowledge, we have no better than thoſe which we have choſen.

I pretend to redouble the *Dwarf-trees* of our principal *Pears*, at leaſt *Four* or *Five* times over, before I multiply the others, and before I proceed to place a ſcore of thoſe which we have mentioned in paſſing. I fee well enough they are extremely eager to produce themſelves; but yet, methinks, whatever Merit they may have, and which I diſpute them

them not, at leaſt upon the Foot it is on, I ſay, I think I may affirm in regard to them, that all of them together durſt not preſume to enter into Conteſtation againſt any of thoſe principal ſorts, though they ſhould take them one by one.

And therefore I muſt counſel them, to have patience yet for ſome time, ſince, in my Opinion, their Condition will not be over-unhappy if they be admitted to appear each of them once in great Gardens, after they have firſt ſeen *Four* or *Five* of the moſt Honourable Places given to every one of them which are already actually eſtabliſh'd, and which, if I may be permitted ſo to ſpeak, are among our Fruits that which thoſe called the *Keys* in a Pack of Hounds are in Hunting.

This being ſettled, and we now beginning to enter into Gardens that are indifferent large, my Judgment is, That, to plant them Skillfully, we ought, firſt, to make a Deſignment of a particular Canton or Plat of Ground for the Fruits of each Seafon, that ſo they may not be confuſedly mix'd pell-mell one among the other, but that the *Summer-Fruits* may be in a place apart by themſelves, and thoſe of *Autumn* and *Winter* in like manner by themſelves; for want of which Regulation, there happens ſeveral Inconveniences which I elſewhere ſhall lay open; and ſecondly, to aſſign every Tree its Place in the following Order, and conſequently to give,

*The twenty fifth place to a third Gray Butter-pear.*

*The twenty ſixth to a ſecond Virgoulee.*

*The twenty ſeventh to a ſecond Leſchallerie.*

*The twenty eighth to a ſecond Thorn-pear.*

*The twenty ninth to a ſecond Ambret.*

*The thirtieth to a ſecond St. Germain.*

*The thirty firſt to a ſecond Ruſſelet, or Ruſſetin.*

*The thirty ſecond to a ſecond Craſſane.*

*The thirty third to a ſecond Robine.*

*The thirty fourth to a ſecond Cuiſſe-Madam, or Lady-Thighs.*

*The thirty fifth to a ſecond Colmar.*

*The thirty ſixth to a ſecond Petit-oin.*

*The thirty ſeventh to a third Winter Boncretien.*

*The thirty eighth to a fourth Butter-pear.*

*The thirty ninth to a third Virgoulee.*

*The fourth to a third Leſchallerie.*

*The forty firſt to a third Thorn-pear.*

*The forty ſecond to a third Ambret.*

*The forty third to a third St. Germain.*

*The forty fourth to a firſt Flower'd Muſcat, or otherwiſe call'd a*

*Long tail'd Muſcat of Autumn.*

*The forty fifth to a third Verte-longue, or Long-green-pear.*

*The forty ſixth to a third Craſſane.*

*The forty ſeventh to a ſecond Marchioneſs.*

*The forty eighth to a ſecond St. Auguſtin.*

*The forty ninth to a fourth Winter Boncretien.*

*The fiftieth to a fourth Virgoulee.*

And ſo in *Fifty Dwarf-trees*, there will be *Nine Summer ones*, in *Six Kinds*; *Seventeen for Autumn*, in *Eight Kinds*; and *Four and twenty for Winter*, in *Eight other Sorts*.

*The fifty firſt place ſhall be given to a third Marchioneſs.*

*The fifty ſecond to a firſt Musk'd Summer Boncretien.*

*The fifty third to a third Petit-oin.*

*The fifty fourth to a fifth Winter Boncretien.*

*The fifty fifth to a firſt Virgoulee.*

*The fifty ſixth to a fourth Leſchallerie.*

*The fifty ſeventh to a fourth Thorn-pear.*

*The fifty eighth to a fourth Ambret.*

*The fifty ninth to a fourth St. Germain.*

*The ſixtieth to a firſt Long-tail'd Blanquet, or White-pear.*

*The ſixty firſt to a firſt Butter-pear.*

*The ſixty ſecond to a firſt Orange-green-pear.*

*The ſixty third to a fourth Verte-longue, or Long-green-pear.*

*The ſixty fourth to a ſixth Winter Boncretien.*

The sixty fifth to a sixth Virgoule.  
 The sixty sixth to a third Colmar.  
 The sixty seventh to a fourth Crasanne.  
 The sixty eighth to a fourth Marchioness.  
 The sixty ninth to a second Louise-bonne, or Good Louise.  
 The seventieth to a fifth Thorn-pear.  
 The seventy first to a first Ambret.  
 The seventy second to a first Lefchallerie.  
 The seventy third to a first St. Germain.  
 The seventy fourth to a fifth Verte-longue, or Long-green-pear.  
 The seventy fifth to a first Doyennee, or Dean-pear.

By this means, a Garden of Threecore and fifteen Dwarf-trees, will have Twelve for Summer, in Nine Kinds, Twenty six for Autumn, in other Nine Kinds; and Thirty six for Winter, in Eight Sorts.

All the Pears contained in this Number of Seventy five, have been already Described, excepting Four, namely, the Flowery Muscat, the Munked Summer Boncretien, the Orange-green-pear, and the Doyenne or Dean-pear.

The Flowery Muscat, otherwise the Long-tail'd Muscat of Autumn, is an excellent round reddish Pear, of an indifferent bigness, a tender and fine Pulp, and of a rich Taste very proper to be eaten, as one may say, greedily at one chop, just as a good Plum, or a fair Apricot.

The Munked Summer Boncretien comes seldom to good unless it be upon a Free-stock: This Pear is Excellent, and makes a very fine Tree; it is of a very agreeable Shape to look upon, being well made in its Pear, which is of a reasonable bigness, near about that of the fair Bergamot: Its Colour is white on the one side, and red on the other; its Pulp is between short and tender, having a great deal of Juice accompanied with an agreeable Perfume; its unhappiness is, That it comes in at the same time with the Robine-pear, by which it is always eclipsed, and with the good Peaches of the end of August, which hardly suffer any Pears in their Company; but however, I thing it worthy to enter at least once into a Garden of Threecore and fifteen Trees.

As for the Orange-green-pear, it has a considerable number of small Friends: All the World knows it by its Name, and, in effect, it is a common and popular Pear, and which, in the time of our Fathers, made a pretty great Figure in Gardens; so that among all old Trees, we fail not to find a great many of this Fort. I do not believe any Body will go about to chase it out of the Place which I have given it. The time of its ripening, which is at the beginning of August, that is to say, a little before the Robine, the Munked Boncretien and the Peaches: Its short eating Pulp, its sugred Juice, with its Perfume altogether peculiar for its kind, its Shape and Make which is pretty big, flat and round; its hollow Eye or Crown, its green Colour tinged with Carnation; but particularly the Abundant Crop that accompanies it almost always upon a Dwarf-tree, and which is very favourable for Menial Servants and for Communities; all these Circumstances make a great Solicitation for it. And its Vanity is not great, it aspires not at all to the Honour of a Wall-tree, but is content with its Sixty second place, which with a good Luck let us leave it.

In fine, the Doyenne or Dean-pear enters last into a Garden of Threecore and fifteen Dwarf-trees, and performs its Duty not amiss there: It is otherwise called the St. Michael, the White Butter-pear of Autumn, the Snow-pear, the Bon-enr, or Good Graff, &c. It is of the bigness and shape of a fair Grey Butter-pear, and unhappily for it, comes in at the same time with that Butter-pear; before which, in truth, for its Honour's sake, it ought almost never to appear: Its Picture tells us, That it has a thick short Stalk, a very smooth Skin, a greenish Colour which grows very yellow when 'tis ripe; it is a right melting Pear, and its Juice is sweet, but commonly 'tis such a sweetness that is not very noble, nor of no high relish, notwithstanding I know not what little Perfume of which sometimes it has a smack, and which seems to me not worthy of any great Esteem: Its Pulp easily grows soft, and as it were doughy and sandy; so that 'tis somewhat difficult to nick the just time of gathering this Pear; but if care be taken together it pretty green, and to serve it up before it has attained a clear yellow Colour, which is a mark of its over-Maturity, we may venture to let it shew it self, without any fear of receiving any disgrace thereby.

I had one Year some of them that proved so good, that I was almost ready to believe them of a particular Kind, but I never could see the like since: It has in all sorts of Soils the advantage of being very Fruitful, which procures it among many of the middling

sort of Gardeners, a very particular Esteem; and it has besides another advantage of being Beautiful, which, during the Month of October, gives it a place in all the Pyramids served up at great Tables. It meets with a good many curious Persons that much more value it than I do; but I cannot tell how to help it, and they must pardon me if I tell them, that I am almost alhamed I have so well placed it. We have since this little while a new Pear under the name of *Befi de la Motte*, which pretty near resembles a large Ambret, save only that it is spotted with Red; if this Pear should prove another Year to be of as melting a Substance, and to have so pleasing a Juice as it had about the end of October in 1685, which is the time of its Maturity, the Doyennee or Dean-pear will be in great danger of being obliged to yield to this latter the place I have given it, at least, it shall see it received immediately next after it.

Though thus far, in some of these first Gardens, and, for Example, in that of Threecore and fifteen Pear-trees. The number of some Kinds for Autumn, be very great in proportion to those for Winter; for there are Twenty seven Trees of the first Sorts, and but Thirty seven of the other, yet I should not be against any ones changing a little that Regulation, by retrenching a part even of the Summer-pears, which are to the number of Twelve, to multiply in their place, such kinds of other Seasons as should most please him.

And, for that reason, I should think my self much to blame, if when we shall all be Planting of great Gardens, I should counsel all the World to place there for Example, almost as many Verte-longues or Long-green-pears, or even of Butter-pears too, &c. as of Boncretiens, Ambrets, Virgoules, Lefchalleries, Thorn-pears, De la Fare, &c. Nay, and I am assured, the great Lovers of those good Pears of Autumn, would not disapprove this Conduct; I will sometimes multiply them, and sometimes also those of the Second and Third Clafs, but it shall be always with this Consideration, which ought to serve for a Rule to every Gard'ner, and which I propose to my self as a Direction for every other Person in particular, that is to say, that regularly we should not strive to have more of each sort of Fruits, than just about what we may probably spend either our selves, or in our own Families, or in Entertainment of Friends, without giving those Fruits the time miserably to rot and spoil: Nay, I believe that those Pears which have not the good Fortune to last long, and which, as well as we, have reason to envy that advantage to so many bad sorts, which without any care, and as 'twere in spite of us, keep easily till the coming in of the next Summer-fruits; I believe, I say, that those good Pears would think themselves offended, if we should multiply them in such a manner, that instead of being all of them employed whilst in their perfect Maturity, in performing their Duty to Mankind, a great part of them should see themselves insensibly become unserviceable, by being over-run with Rottenness.

For when we have but a little quantity of each sort of Fruit, it seldom happens we let them be spoiled; no, we visit them too often to give them time for that: Whereas, when we have a great abundance of them, nothing is so ordinary as to see a good part of them spoiled. And therefore in this point we ought judiciously to determine what quantity we shall, as near as can be computed, need to have of them according to our Designs; and according to that Foot, to proportion, as I have said before, the number of Trees of each kind, which we are to Plant in our Garden.

There are some of these Trees that are long before they come to bear, as the Ambret, the Robine, the Bourdon, the Ruffeler, the Thorn-pear, and above all the rest, the Virgoulee, the Colmar, &c. And there are some that are quick enough in producing, provided they be grafted on Quince-stocks, as the Verte-longue or Long-green-pear, the Butter-pear, the Doyennee or Dean-pear, &c. But these last bear such Fruits, that it is convenient to have a pretty good number of them, because we eat a great many of them in their Season, they coming in while the Weather is yet hot, and in a time in which we are not used to be contented with half a Pear; for, in earnest, a Man must eat a great many Ruffelers, Verte-longues or Long-green-pears, Butter-pears, Doyennee or Dean-pears, &c. before he can satisfy his Appetite; and Nature, that is as well acquainted with our Passions as our Necessities, and which intended equally to accommodate the one as well as the other, has, as we may say, given to these latter sorts of Pears the Gift of Fruitfulness, as well as that of Quickness in Bearing, with design, that in their Season we might have a sufficient Plenty of them, since we are in a Condition to spend them both with Profit and Pleasure.

It ought not then to be wondred at, if so far as in those Sizes of Gardens that can hold but about Seventy five Trees, I desire there should be almost as many Trees of those Fruits that ripen, as 'twere, altogether, as of some of those that ripen successively one after

*Befi de la Motte,*  
a new Pear Described.

another, and which by consequence, give us the time to make a commodious and regular Consumption of them; for, as I have said, when I come to treat of larger Plantations, I shall doubtless use much more moderation in regard to those Fruits which keep but a little while, than to those others that having the advantage of being good, as well as lasting, will keep for several Months together.

However I leave it to every curious Person, to multiply the Fruits of one Season more than those of another, according to his own Inclination or Occasions. For such a Gentleman, for Example, upon the consideration that he is to pass such and such certain times in the Country, where he is frequently to entertain Company, must necessarily have more Fruits of the Months of *September, October and November*, than of the other Seasons, and in such a Case, the number of the *Russetts, Verte-longues or Long-green-pears, Butter-pears, Doyennes or Dean-pears, Bergamots, Marchionesses, Lansacs, Crajannes, Vine-pears, Petit-oins, Louise-bonnes or Good-Louises, Befs de la Motte*, and even of *Messire-Johns*, &c. must be augmented, and the kinds proportionably diminished. And for another Gentleman, on the contrary, for other good Reasons, as for Example, because he cannot go into the Country to spend the *Summer-Fruits*, nor can have them brought him from thence, it is absolutely expedient to have only good store of *Winter-Fruits*: It will be most convenient largely to multiply the *Virgoules, Winter-Boncretiens, Thorn-pears, Ambrets, Lefchafferies, Colmars, La Fare, St. Augustins, Dry Martins, Pastourelles*, &c. and to reduce the Fruits of the other Seasons to a smaller Number.

It is very certain, that my true Design in this Treatise of the Choice and Proportion of Fruits, was without any regard to such particular Circumstances as these, which may be infinite, whether in respect of every Head of a particular Family, or in regard of such as are Heads of Communities, and indeed it was impossible it should provide for them: No, it was chiefly intended only for the Curious in general, who desire to have regularly and equally all the year long, as great store as can be of the choicest Fruits out of their Gardens, of what bigness soever they be: And as for the rest of the Curious, they may from the Knowledge I here have communicated of the good Fruits of every Season, and of the last of each kind of them, gather sufficient Directions to assist them in making such determinations thereupon, which shall be most conformable to their Intentions.

To continue then at present, what I have begun for the first sort of curious Persons, I think, we ought to give.

*The seventy sixth place to a first Befs de la Motte.*  
*The seventy seventh, to a sixth Butter Pear.*  
*The seventy eighth, to a second Great Blanquet, or White Pear.*  
*The seventy ninth, to a third Louise-bonne, or Good Louise.*  
*The eightieth, to a second Long-tail'd Blanquet, or White Pear.*  
*The eighty first, to a seventh Winter Boncretien.*  
*The eighty second, to a sixth Thorn Pear.*  
*The eighty third, to a sixth Lefchafferie.*  
*The eighty fourth, to a sixth Ambret.*  
*The eighty fifth, to a seventh Virgoulee.*  
*The eighty sixth, to a sixth Verte-longue, or Long-green-pear.*  
*The eighty seventh, to an eighth Virgoulee.*  
*The eighty eighth, to a seventh Thorn-pear.*  
*The eighty ninth, to a seventh Ambret.*  
*The ninetieth, to a seventh Lefchafferie.*  
*The ninety first, to a sixth St. Germain, otherwise*  
*The Unknown La Fare.*  
*The ninety second, to a fourth Colmar.*  
*The ninety third to a ninth Virgoulee.*  
*The ninety fourth, to a second Flowery-Muscat.*  
*The ninety fifth, to a first Dry Martin.*  
*The ninety sixth, to a fourth Petit-oin.*  
*The ninety seventh, to a fourth Louise-bonne, or Good Louise.*  
*The ninety eighth, to an eighth Thorn-pear.*  
*The ninety ninth, to an eighth Ambret.*  
*The hundredth, to a tenth Virgoulee.*

There then you have a Garden of a Hundred Dwarf-pear trees, regulated with all the Choice and Proportion I am able to prescribe, having introduced into it, Eight and twenty Kinds

Kinds of *Pear-trees*, namely, nine for *Summer*, ten for *Autumn*, and nine for *Winter*: The nine for *Summer* consist of fourteen Trees, the ten for *Autumn*, of thirty three, and the nine for *Winter*, of fifty three.

The Fourteen *Summer fruit-trees* are two *Cuisse-Madams*, or *Lady-Thighs*, two *Robines*, *The Summer-Pear-tree Specified.*  
 two *Russetts*, two *Great-Blanquets*, or *White-pears*, two *Longtail-Blanquets*, one *Muscat Robert*, one *Skin-left-pear*, one *Musked-Summer-Boncretien*, one *Orange-green-pear*: and I think

there are *Summer-pears* enough, with some little *Muscat-pears* against a Wall.

The Thirty Six of *Autumn*, are six *Butter-pears*, six *Verte-Longues*, or *Long-green-pears*, *The Autumn-Pears Specified.*  
 four *Crajaners*, four *Marchionesses*, four *Louise-bonnes*, or *Good-Louises*, four *Petit-oins*, one *Messire-John*, two *Flowery-Muscats*, one *Doyenne*, or *Dean pear*, and one *Befs de la Motte*, all these being helped out with some *Bergamot Wall-trees*, make a pretty well furnished

*Autumn.*  
 The Fifty Three for *Winter fruit*, are seven *Winter-Boncretiens*, ten *Virgoules*, eight *Thorn-pears*, eight *Ambrets*, seven *Lefchafferies*, six *St. Germain*, otherwise *Unknown de la Fare*, four *Colmars*, two *St. Augustins*, and one *Dry Martin*.

To begin the Second Hundred of Dwarf-trees.

*The Hundred and first Pear-tree should be an Eleventh Virgoulee.*

*The Hundred and Second, an Eighth Lefchafferie.*

*The Hundred and Third, a Ninth Winter-Thorn-Pear.*

*The Hundred and Fourth, a First Bourdon or Humble-Bee-pear.*

*The Hundred and Fifth, a Seventh Lazrus, otherwise St. Germain.*

*The Hundred and Sixth, a First Colmar.*

*The Hundred and Seventh, a Seventh Butter-pear.*

*The Hundred and Eighth, a Seventh Verte-Longue, or Long-green-pear.*

*The Hundred and Ninth, a Tenth Thorn-pear.*

*The Hundred and Tenth, a Fifth Petit-oin.*

*The Hundred and Eleventh, a First Sugar-green-pear.*

*The Hundred and Twelfth, a First Lansac.*

*The Hundred and Thirteenth, a Third Russet.*

*The Hundred and Fourteenth, a Third Robine.*

*The Hundred and Fifteenth, a First Maudling-pear.*

*The Hundred and Sixteenth, and the Hundred and Seventeenth, two Espagnes or*

*Reserve-pears.*

*The Hundred and Eighteenth, a Twelfth Virgoulee.*

*The Hundred and Nineteenth, a Sixth Colmar.*

*The Hundred and Twentieth, an Eighth Winter-Boncretien.*

*The Hundred and Twenty First, a Second Dry-Martin.*

*The Hundred and Twenty Second, a Seventh Colmar.*

*The Hundred and Twenty Third, an Eighth Butter-pear.*

*The Hundred and Twenty Fourth, a First Bugi.*

*The Hundred and Twenty Fifth a Second Bugi.*

And so in the Number of a Hundred Twenty Five *Pear-trees*, there are Twenty of *Summer-Fruits*, in Twelve kinds, Thirty nine of those of *Autumn*, in Twelve kinds, and Sixty Six of *Winter-Fruits*, in Ten kinds.

The Twenty *Summer-Fruit-trees*, are three *Russetts*, three *Robines*, two *Cuisse-Madams*, *The Summer-Pear Specified.*  
 or *Lady-Thighs*, two *Great-Blanquets*, or *White-Pears*, two *Longtail-Blanquets*, two *Espagnes*, or *Reserve-pear*, one *Skin-left-pear*, one *Musked Summer-Boncretien*, one *Orange-green-pear*, one *Muscat-Robert*, one *Bourdon*, or *Humble-Bee-pear*, one *Maudling-pear*.

The Thirty Nine of *Autumn*, are Eight *Butter-pears*, seven *Verte-Longues*, or *Long-green-pears*, five *Petit-oins*, four *Marchionesses*, four *Crajaners*, four *Louise-bonnes*, or *Good-Louises*, two *Flowery-Muscats*, one *Doyenne* or *Dean pear*, one *Lansac*, one *Befs de la Motte*, one *Sugar-green-pear*, one *Messire-John*. *Those of Autumn Specified.*

The Sixty Six of *Winter-Fruits*, are eight *Boncretiens*, twelve *Virgoules*, ten *Thorn-pears*, eight *Lefchafferies*, eight *Ambrets*, seven *Lansacs*, seven *Colmars*, two *Dry-Martins*, two *St. Augustins*, and two *Bugi*. *Those of Winter Specified.*

Into this last Number of Twenty Five, I have introduced Five sorts of *Pears* which had no entrance into the first Hundred: Namely, three *Summer ones*, viz. the *Bourdon*, or *Humble-Bee-pear*, *Lefpigne*, or the *Reserve-pear*, and the *Maudling pear*; one of *Autumn*, which is the *Sugar-green-pear*, and one of *Winter*, which is the *Bugi*.

The Bourdon, or Humble-Bee-Pear Described.

The Bourdon, or Humble-Bee-pear, is a Pear of the end of July, which for its Bigness, quality of its Pulp, its Taste, its Perfume, and its Juice, as well as for the time of its Ripening, very much resembles the *Muscus-Robert*, and is little different from it in its Stalk, which is longer in this than in that.

The Espargne, or Reserve-Pear Described.

The *Espargne*, or *Reserve-pear*, otherwise, the *St. Sanfon*, is a Red Pear, indifferent big, and very large, and as one may say, a little vaulted in its shape: It has a tender Pulp, a little sowerish, and ripens about the end of July: Of this Pear, one may say without any design to offend it, that it has more beauty than goodness, and accordingly, it triumphs more in the *Pyramids*, than in the *Mouth*.

The Mauldin-Pear Described.

The *Mauldin-pear* is a Pear that is greenish and pretty tender, and approaching very near in shape to the *Bergamot*: It ripens at the beginning of July, and so is one of the first Pears of the Summer; but it is very apt to deceive us, if we stay till it begins to grow Yellow before we gather it, because then it is past its goodness, and is grown Doughy.

The Sugar-green-Pear Described.

The Compounded Name the *Sugar-green-pear* bears, describes to us at the same time both its Juice and its Colour: If it were a little bigger, it might be taken for a *Winter-Thorn-pear*, it so much resembles it in shape; it ripens towards the end of October, its Pulp is very Buttery, its Juice Sugared, and its Taste agreeable, having hardly any other fault, than that of being a little strong towards the Core.

The Bugi, or Easter-Bergamot Described.

The *Bugi*, to which is regularly given the Sir-name of *Bergamot*, and of *Easter-Bergamot*, because in its green Colour, and in its Bigness, it has some Air of the good *Autumnal Bergamot*, yet being a little less flat towards the Eye or Crown, and a little longer towards the Stalk; the *Bugi*, I say, is a Pear speckled with little grey specks, which grows a little yellowish in ripening, whose Pulp participates at the same time of tenderness and firmness, and as one may say, eats almost short; it has the misfortune sometimes to grow Doughy and Mealy, which happens when 'tis suffered to grow too ripe before it be gathered: Its Juice which is in abundance enough, has I know not what smack of sourness, which often makes it be contemned and rejected, but a little Sugar serves it for a great remedy; and in truth, having the advantage to stay to Mellow in *Lent*, when it makes a good figure, appearing then almost alone in the great sterility of Fruits, it merits at least the place I have given it, nay, and the curious Person, in whose Grounds it usually succeeds well, may very well place it better than I have done.

To continue a second Hundred of Dwarf-trees.

The hundred twenty sixth Pear-tree, should be a ninth Winter-Boncretien.

The hundred twenty seventh, a ninth Butter-pear.

The hundred twenty eighth, a first great Oignonnet, or Onionet-pear.

The hundred twenty ninth, a second Sugar-green-pear.

The hundred and thirtieth, a first little Blanquet, or White-Pear.

The hundred and thirty first, a thirteenth Virgoulée.

The hundred thirty second, an eleventh Thorn-pear.

The hundred thirty third, a ninth Ambret.

The hundred thirty fourth, an eighth Verte-Longue, or Long green-pear.

The hundred thirty fifth, a sixth Petit oin.

The hundred thirty sixth a first Angober.

The hundred thirty seventh, a fourth Russelet.

The hundred thirty eighth, a fourth Robine.

The hundred thirty ninth, a fifth Crafrane.

The hundred and fortieth, an eighth Unknown La Fare, otherwise St. Germain-pear.

The hundred forty first, an eighth Colmar.

The hundred forty second, a second Melrose-John.

The hundred forty third, a fourteenth Virgoulée.

The hundred forty fourth, a tenth Lefchallier.

The hundred forty fifth, a tenth Ambret.

The hundred forty sixth, a first Double-Flower'd-pear.

The hundred forty seventh, a fifth Marchioness.

The hundred forty eighth, a first Franc-Real, or Frank-Royal-pear.

The hundred forty ninth, a second Skin-less-pear.

The hundred and fiftieth, a first Befidery.

October and November.

In this last Number of Pear-trees I have newly placed, there are five, of which I have yet made no Description, namely the *Double Flower*, the *Franc Real*, or *Frank Royal*, the *Angober*, the *Besidery*, and the *Great Onionet*, or *Onion Pear*: Therefore to satisfy the Curiosity of them that have a mind to know what I think of them,

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I shall tell them, that I make a very particular account of the *Double Flower*, or *Double Flower'd Pear*, not to Eat Raw, though some certain Persons like it well enough for too, finding that in it, which I do not, that is, something pleasant in its Pulp, and in its Taste; But I esteem it first, because it is altogether beautiful to look upon, it being really a large flat Pear with a long straight stalk, a smooth skin, Bluish-coloured on one side, and Yellow on the other; in the second place, there being no scruple made in letting it appear in great Dishes of Fruit; I prize it for the service it renders on such occasions: And lastly, because after it has made an agreeable figure for several days together, and that by often handling, it begins to loose the Flower of its lovely Colour, and to grow quite dull and blackish, it then remains in a condition to signalize its true Excellency; for it is most useful and agreeably employed in making one of the loveliest and best *Compotes*, or *Wet Sweet-meats* in the World, having a Marrowy Pulp, without being incommenced with the least Ironies, and having above all, abundance of Juice, that easily takes a beautiful Colour over the Fire; so that, in my judgment, and according to my Palate, all that together affords me great Reasons to esteem this Pear, though I should only consider it as particularly good to Preserve, or otherwise prepare by Fire.

It is likewise well known, that the *Franc-Real*, or *Frank-Royal*, which some name, the *Winter Finer*, is a Pear of great increase, Large, Round and Yellowish speckled, with little Reddish specks, with a short stalk, and having a wood quite Mealy.

The *Angober* is also known to be a pretty big long Pear, Bluish-coloured on one side, and of a Greyish Russet on the other; the Wood of its Tree is very much like that of the *Butter-Pear* and the Pear is not much unlike that.

It is likewise well known, that the *Besidery* is a pretty round Pear, about the bigness of a large *Tennis-Ball*, of a Yellowish and Whith Green-colour, with an indifferent straight and long stalk, and Ripening in October and November.

The great *Onionet*, or *Onion-Pear*, otherwise *Amiré Roux*, or *Red-Wonder-Pear*, and the *King of the Summer*, is a Pear of the middle of July, which is pretty Red-coloured, round and indifferent large.

I return now to continue my project for the choice and proportion of Fruits, for the Garden that may hold a Hundred and Fifty One Dwarf-trees, and accordingly I design for

The hundred a fifty first Pear-tree, a tenth Winter Boncretien.

The hundred fifty second, a fifteenth Virgoulée.

The hundred fifty third, a sixteenth Virgoulée.

The hundred fifty fourth, an eleventh Lefchallier.

The hundred fifty fifth, a twelfth Thorn-pear.

The hundred fifty sixth, a tenth Butter-pear.

The hundred fifty seventh, a first Vine-pear.

The hundred fifty eighth, a first Ronville-pear,

Which some name La Haere-Naille, and others, *Martin Sire*; it is a Celebrated Pear upon the River *Loire*, being in Season in the Months of January and February; Its bigness and shape come very near that of the fair *Russelet* or *Russetin*; it has a pretty hollow or inward sunk Crown or Eye, and its Belly is ordinarily bigger on the one side than on the other, but yet every where pretty big, and handsomely sloping down towards the stalk, which is of a milding thickness and length, and not at all set hollow; the Colour is lively on one side, though more in some Pears than in others of them, and the other side grows very Yellow at the time of its Mellowness; Its Skin is very slick and Sain-like: As for the considerations that have engaged me to place it here, they are the time of its Maturity, and because its Juice is Sugred, and has a little smack of Perfume, that is agreeable enough, and for the shortness of its Pulp in Eating; Its faults are, that it is small and hardish, and a little gritty. But they being excusable by its other good qualities, I therefore was minded to place at least one Tree of it in a Garden of a Hundred and Fifty Eight Dwarf-trees, and for,

The hundred and fifty ninth, I will place a fifth Russelet.

The hundred and sixtieth, a fifth Robin.

The hundred sixty first, a sixth Crafrane.

The hundred sixty second, a sixth Marchioness.

The hundred sixty third, a seventh Petit-oin.

The hundred sixty fourth, a third Cuisse-Madam, or Lady-Thigh.

The hundred sixty fifth, a ninth Colmar.

The hundred sixty sixth, an eleventh Winter Boncretien.

The hundred sixty seventh, a second Musked Boncretien.

The hundred sixty eighth, a second Muscat-Robert.

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The

The hundred sixty ninth, a third Skinsless-pear.  
 The hundred and seventieth, an eleventh Butter-pear.  
 The hundred and seventy first, a second Maudlin.  
 The hundred seventy second, a seventeenth Virgoulee.  
 The hundred seventy third, a twelfth Lefchafferie.  
 The hundred seventy fourth, a second Bourdon, or Humble-bee-pear.  
 The hundred seventy fifth, a third Dry Martin.  
 The hundred seventy sixth, a third Bugi.  
 The hundred seventy seventh, a twelfth Winter-Boncretien.  
 The hundred seventy eighth, a tenth Verte-longue, or Long-green-pear.  
 The hundred seventy ninth, a second Doyennee, or Dean-pear.  
 The hundred and eightieth, a first Salviati.  
 The hundred eighty first, a twelfth Butter-pear.  
 The hundred eighty second, an eleventh Ambret.  
 The hundred eighty third, an eighth Petit-oin.  
 The hundred eighty fourth, a ninth Unknown La Fare, or otherwise St. Germain.  
 The hundred eighty fifth, a tenth Colmar.  
 The hundred eighty sixth, a twelfth Ambret.  
 The hundred eighty seventh, a second Lanfac.  
 The hundred eighty eighth, a seventh Crasfane.  
 The hundred eighty ninth, a thirteenth Winter Boncretien.  
 The hundred and ninetieth, an eighteenth Virgoulee.  
 The hundred ninety first, a second Besi de la Motte.  
 The hundred ninety second, a sixth Russelet.  
 The hundred ninety third, a sixth Robine.  
 The hundred ninety fourth, a first Cassiolet.  
 The hundred ninety fifth, a first Unknown Chaineau.  
 The hundred ninety sixth, a first Little Muscat.  
 The hundred ninety seventh, a first Hally Russelet.  
 The hundred ninety eighth, a first Portal.  
 The hundred ninety ninth, a second Portal.  
 And the two hundredth shall be a third Augustin.

I cannot here forbear expressing some Regret, that among so many Dwarf-trees, I find so few Boncretiens, and no Autumnal Bergamots; I have already declared the Reasons I had for that, which were the hopes we had to have a pretty good number of Wall-trees of both of them; and because those Grounds that are subject to be Cold and Moist, are altogether fatal to them. But if our Ground be reasonably dry, because we have a very great Inconvenience to fear from the *Tiger-Bab*, a cursed little volatile Insect that horridly destroys the *Wall-pears*, and hinders us from planting many of them, especially in the good Expositions of the East and South; I say therefore, if our Ground has not that great Defect of being too Cold and Moist, it will be convenient enough to Plant in it a good number of Boncretien Dwarf-trees.

Therefore the two hundred and first shall be a Winter Boncretien.

The two hundred and first, a Winter Boncretien.  
 The two hundred and second, another Winter Boncretien.  
 The two hundred and third, a Winter Boncretien.  
 The two hundred and fourth, a Winter Boncretien.  
 The two hundred and fifth, a Winter Boncretien.  
 The two hundred and sixth, a Winter Boncretien.  
 The two hundred and seventh, a Winter Bergamot.  
 The two hundred and eighth, a Virgoulee.  
 The two hundred and ninth, a Virgoulee.  
 The two hundred and tenth, a Virgoulee.  
 The two hundred and Eleventh, a Lefchafferie.  
 The two hundredth and twelfth, a Lefchafferie.  
 The two hundred and thirteenth, an Ambret.  
 The two hundred and fourteenth, an Ambret.  
 The two hundred and fifteenth, a Thorn-pear.

The two hundred and sixteenth, a Thorn-pear.  
 The two hundred and seventeenth, a Crasfane.  
 The two hundred and eighteenth, a Petit-oin.  
 The two hundred and nineteenth, a La Fare, otherwise a St. Germain.  
 The two hundred and twentieth, a La Fare.  
 The two hundred twenty first, a Marchioness.  
 The two hundred twenty second, a Marchioness.  
 The two hundred twenty third, a Dry Martin.  
 The two hundred twenty fourth, a Dry Martin.  
 The two hundred twenty fifth, a Butter Pear.  
 The two hundred twenty sixth, a Butter Pear.  
 The two hundred twenty seventh, a Russelet.  
 The two hundred twenty eighth, a Russelet.  
 The two hundred twenty ninth, a Musk Summer Boncretien.  
 The two hundred and thirtieth, a Messire John.  
 The two hundred thirty first, a Robine.  
 The two hundred thirty second, a Verte-longue, or Long-green-pear.  
 The two hundred thirty third, a Verte-longue.  
 The two hundred thirty fourth, a Cassiolet.  
 The two hundred thirty fifth, a Lanfac.  
 The two hundred thirty sixth, a Cuiffe-Madam, or Lady-thigh.  
 The two hundred thirty seventh, a Cuiffe-Madam.  
 The two hundred thirty eighth, a Long-tail'd Blanquet, or White-pear.  
 The two hundred thirty ninth, a first Musk Blanquet, or White-pear.  
 The two hundred and fortieth, an Orange-green Pear-tree.  
 The two hundred forty first, a Belidery.  
 The two hundred forty second, an Espargne, or Reserve Pear-tree.  
 The two hundred forty third, a Messire John.  
 The two hundred forty fourth, a Sugar-green Pear.  
 The two hundred forty fifth, a Winter Boncretien.  
 The two hundred forty sixth, a Winter Boncretien.  
 The two hundred forty seventh, a Winter Boncretien.  
 The two hundred forty eighth, a Winter Boncretien.  
 The two hundred forty ninth, a Virgoulee.  
 The two hundred and fiftieth, a Virgoulee.  
 The two hundred fifty first, a Virgoulee.  
 The two hundred fifty second, an Ambret.  
 The two hundred fifty third, an Ambret.  
 The two hundred fifty fourth, a Thorn-pear.  
 The two hundred fifty fifth, a Thorn-pear.  
 The two hundred fifty sixth, a Lefchafferie.  
 The two hundred fifty seventh, a Lefchafferie.  
 The two hundred fifty eighth, a Lefchafferie.  
 The two hundred fifty ninth, a Dry Martin.  
 The two hundred and sixtieth, a Petit-oin.  
 The two hundred sixty first, a La Fare.  
 The two hundred sixty second, a St. Augustin.  
 The two hundred sixty third, a Marchioness.  
 The two hundred sixty fourth, a Butter-pear.  
 The two hundred sixty fifth, an Amador.  
 The two hundred and sixty sixth, a first Spanish Boncretien.  
 The two hundred sixty seventh, a Louise-bonne, or Good Louise pear.  
 The two hundred sixty eighth, a Doyenne, or Dean pear.  
 The two hundred sixty ninth, a Portal.  
 The two hundred and seventieth, a Louise bonne, or Good Louise.  
 The two hundred and seventy first, a Belidery.  
 The two hundred seventy second, a Belidery.  
 The two hundred seventy third, a Double flower, or Double flowered pear.  
 The two hundred seventy fourth, a Frank-real, or Frank Royal.  
 The two hundred seventy fifth, a Frank Royal.  
 The two hundred seventy sixth, a Frank Royal.

*The two hundred seventy seventh, an Angober.*  
*The two hundred seventy eighth, an Angober.*  
*The two hundred seventy ninth, a first Donville.*  
*The two hundred and eightieth, a second Donville.*  
*The two hundred and eighty first, a Robine.*  
*The two hundred and eighty second, a Robine.*  
*The two hundred and eighty third, a St. Lezin.*  
*The two hundred eighty fourth, a Louise-bonne, or Good Louise.*  
*The two hundred eighty fifth, a Colmar.*  
*The two hundred eighty sixth, a Crafanne.*  
*The two hundred eighty seventh, a Butter-pear.*  
*The two hundred eighty eighth, a Winter Bergamot.*  
*The two hundred eighty ninth, a Musk'd Boncretien.*  
*The two hundred and nintieth, a Verte-long, or Longgreen Pear.*  
*The two hundred and ninety first, a Spanish Boncretien.*  
*The two hundred ninety second, a Crafanne.*  
*The two hundred ninety third, a Vine Pear tree.*  
*The two hundred ninety fourth, a Fondante, or Melting Pear of Brest.*  
*The two hundred ninety fifth, a Musk'd Blanquet, or white musk'd Pear.*  
*The two hundred ninety sixth, a Salviati.*  
*The two hundred ninety seventh, a Summer Satin-pear.*  
*The two hundred ninety eighth, a Muskat-Robert.*  
*The two hundred ninety ninth, a Bourdon, or Humble-bec-pear.*  
*The three hundredth shall be a Skinless-pear.*

I have here inserted two *Spanish Boncretiens*, two *Salviatics*, two *Musk'd Blanquets*, or *Musk'd White-pears*, and two *Donvilles*; it is but just I should now give you an account why I did so, and should teach you to know them.

The *Spanish Boncretien* is almost of all the *Pears*, that which has puzzled me most, and so much, that I am almost ashamed to tell it; I found my self naturally inclined to esteem it at first for its shape, for one can hardly forbear it. It is a great thick long *Pear*, and handfomly made into a Pyramidal Form, resembling altogether in that, a very beautiful *Winter Boncretien*, from whence proceeded the finest Name it bears; it is on one side painted with a lovely bright red, all speckled with little black specks, on the other side it is of a whitish Yellow. Its Pulp eats the softest of all the *Pears* I know: It has ordinarily a sweet sugred and indifferent good Juice, when it grows in good Ground, and comes to its perfect mellowness, which happens commonly from mid-November to the middle of December, and sometimes lasts till January. It was for all those qualities, that for two or three Years together, I had conceived a great Esteem for it; but, besides, that in that very same Season, we have all our principal tender and melting *Pears*, I have for more than Twenty Years, always found its Pulp so harsh and gross, and so stony, and particularly in Years or Grounds that are a little moist, that at last, in spite of my first inclination, I was forced to resolve to deny it Entrance into many Gardens; and to I am of Opinion, that we ought to be content to suffer at least some Trees of it in those Gardens where the number of *Dwarf-trees* exceeds two Hundred and Fifty, and where the Soil is indifferent good: It having always this Advantage, That it contributes much with its good Meen and lovely Appearance, to the adorning of *Fruit-Pyramids*.

The *Salviati* altogether resembles a *Besleyer* in its Shape, but not in Colour: It is a pretty big round *Pear*, with a pretty long and small Stalk set in a little hollow, with an Eye or Crown also a little hollow and small; it is of a yellow rusket-whitish Colour; those that have great red streaks, have a pretty rough Skin, but those who are without that red are soft skind enough: Its Pulp is tender, but not very fine; its Juice is sugred and perfumed, coming nearer in Taste to that of the *Robine*, than of the *Orange-pear*: But this Juice is but in little quantity; the *Pear* is pretty good, and would be still better received, if it came not in with the *Peaches* of the end of August, and of the Beginning of September.

The *Musk'd Blanquet*, or *la Blanquette Musquée*, that is, the *Musk'd Blanquet*, or *White Musk'd-pear*, is a *Pear* of the beginning of July, coming pretty near both in bigness and shape to a *Muscat-Robert*: It has a fine Skin, its Colour is a pale Yellow tinged a little with Red on that side next the Sun; its Pulp is a little firm, so that it is not without some earthy and stony Matter, but the Juice is very sweet and sugred, and upon that account is not unworthy to appear here.

And

### Part III. The Compleat Gard'ner.

And here methinks, I see a great many discontented Persons murmuring at my choice: And they are the Lovers of certain kinds of *Pears*, of which I have not yet spoken, which are, the *Cat-burnt-pear*, the *English-pear*, the *Winter Lemon-pear*, the *Winter Russelet*, the *Brute bonne*, or *Chem-good*, &c. Nay, and there are some among them that love the *Rose-pear*, the *Caillot Rosat*, or *Rose-pebble*, the *Tulip Orange-pear*, the *Villain-pear* of *Anjou*, &c. and who yet durst hardly speak their Minds. Both the one and the other sort of Gentlemen have sought for these *Pears* in the Gardens I have been just now modelling, and not finding them there, every one of them in particular has, as I were taken offence at it, and at the same time would fain make me pass for a Man that does not know all the good Fruits yet, or at least for one that is led away by prejudice.

To which I answer, That I am willing these Gentlemen should every one of them be free to think these *Pears* they speak of good enough to plant in their Gardens, and in that case I willingly consent they should continue to praise them, to multiply them, and employ as much Rhetorick in their Praises as they please: Let them only do me the favour to remember what I said at the beginning of this Treatise concerning the Diversity of Palats, of Soils and of Years, and to be pleased to permit me to tell them in my Justification, That what made me Reject those Fruits about which they are scandalized, was certainly nothing else but because for Twenty Years together, I had found them constantly rather bad than good, in spite of all the Industry I had use in their Cultivation. However because they may happen to meet with certain Circumstances very favourable to that Merit they sometimes have, I shall now, at last, in our great Gardens, do them that Justice I think due to them.

And so to continue the third Hundred of *Dwarf-trees*, I will first place six *Bugi-pear-trees*.

*The three hundred and first, a Bugi.*  
*The three hundred and second, a Bugi.*  
*The three hundred and third, a Bugi.*  
*The three hundred and fourth, a Bugi.*  
*The three hundred and fifth, a Bugi.*  
*The three hundred and sixth, a Bugi.*  
*The three hundred and seventh, a Pastourelle.*  
*The three hundred and eighth, a Pastourelle.*

The *three hundred and ninth, a Pastourelle*: Which is a *Pear* that, notwithstanding a little point of sharpness in its Juice, makes it self be counted by many Curious Persons: It is much of the bigness and shape of a *St. Lezin*, or of a fair *Russelet*; its Stalk is bent downward, not hollow set, and of a middling length and thickness; its Skin is between rough and smooth, growing somewhat moist as it ripens; its Colour on one side is yellowish covered with rusket-spots, and on the other side, it has a small tincture of a blushing red; its Pulp is very tender and butter-like, having nothing of hard or stony Matter; but, as I said just now, fowrish Juice does not please me very well, yet the Months of December and January may well enough suffer some of them. The *English-pear*, the *Cat-burnt-pear*, the *Winter Lemon-pear*, and the *Winter Russelet* shall follow after the *Pastourelles*; and therefore,

The *three hundred and tenth shall be an English Pear-tree*, otherwise called the *English Butter-Pear*, being a *Pear* that is more long than round, resembling in shape and bigness, a fair *Verte-longue*, or *Long green-Pear*, though not in Colour; Its skin is smooth, and of a greenish grey Colour, full of Rusket Specks: Its Pulp is very tender and Butter-like, and full of pleasant Juice, so that it seems by that, to be a *Pear* of perfect goodness; But because its Pulp is commonly mealy, and easily grows too soft, even upon the Tree it self; And in fine, because it comes at the same time with the *Verte-Langue*, or *Long-green-Pear*, the *Petit-Oin*, and the *Lansie*, and sometimes too with the *Russelet*, I think I have not done much amiss in not thinking of it sooner.

The *three hundred and eleventh Dwarf-tree shall be a first Cat-burnt-pear*, otherwise called The *Cat-burnt*, the *Maid* or *Maiden-Pear*, being a *Pear* in Season in the Months of October and November: It might pass sometimes for a *Dry Martin*, it is so much resembles it in shape and bigness, but its Colour being a little different, prevents our mistaking them; It is on one side of a very Rusket Colour, and of the other, pretty clear, without any tincture of *Habella*; its skin is indifferent smooth, and its Pulp tender, but it is a kind of wildish tenderness, inclining to a Doughy consistence, having but little Juice, which is almost like in taste to that of a *Besleyer*, the *Pear* in conclusion, is very strong towards the Core, which makes it be of small value with me, whatsoever, not a few People say in its Vindication, that they have had many *Pears* of this sort which had not so many Faults.

The *three hundred and twelfth shall be a first Winter Lemon-Pear*: This *Pear* is very well named, in respect of its Shape and Colour, which is so like a middle sized *Lemon*, that it might

The *Pastourelle*, *pear* described.

The *Spanish Boncretien*, *Pear* described.

The *Salviati*, *pear* described.

The *Musk'd Blanquet*, or *White-pear*; its shape to a *Muscat-Robert*; its description.

The *English Butter-Pear* described.

The *Cat-burnt*, or *Maiden-Pear* described.

might well be taken for one indeed, especially when it is round enough: Its Pulp is very hard and stony, and full of earthy matter, and we cannot say its excellency consists in that; but it has a good deal of Juice, which is extremely Musk'd, and it is that, that has procur'd it some friends for the Months of *January* and *February*.

The three hundred and thirteenth shall be a first *Winter* Russet. The Pears that pass for *Winter-Russets* in many Gardens, I have already told you, are nothing else but dry *Martins*; But yet there are some that are of a different kind, which resemble the others very much, both in shape and bulk; their Colour is greenish, which grows yellow when they ripen, their Pulp is between tender and short, and full of a little sort of earthiness, they are full enough of Juice, which would appear Sugred enough, were it not too much allay'd by a mixture of an ugly sort of greenish and wildish taste; it is mellow in *February*, and shews its mellowness just as the *Bergamots* do, by a little kind of Dewiness about the skin: The Pear is indifferent good, and might at least maintain its place well enough in Plantations of Gardens of three or four hundred stocks of Trees, though on the other side, it would be no great harm not to admit it at all, we may all in good time, have some standard Tree of it.

The three hundred and fourteenth, shall be a Summer Satin-pear.  
 The three hundred and fifteenth, a second English-pear.  
 The three hundred and sixteenth, a second Cat-burnt-pear.  
 The three hundred and seventeenth, a Summer-Boncretien.  
 The three hundred and eighteenth, a Dry Martin.  
 The three hundred and nineteenth, a Dry Martin.  
 The three hundred and twentieth, a Colmar.  
 The three hundred twenty first, a Louise-Bonne, or good Louise-pear.  
 The three hundred twenty second, a Verte-Longue, or Long-Green-Pear.  
 The three hundred twenty third, a Virgoulee.  
 The three hundred twenty fourth, a Virgoulee.  
 The three hundred twenty fifth, a Virgoulee.  
 The three hundred twenty sixth, a Virgoulee.  
 The three hundred twenty seventh, a Virgoulee.  
 The three hundred twenty eighth, a Virgoulee.  
 The three hundred twenty ninth, an Ambret.  
 The three hundred and thirtieth, an Ambret.  
 The three hundred thirty first, an Ambret.  
 The three hundred thirty second, a Thorn-pear.  
 The three hundred thirty third, a Thorn-pear.  
 The three hundred thirty fourth, a Thorn-pear.  
 The three hundred thirty fifth, a Lefchafferie.  
 The three hundred thirty sixth, a Lefchafferie.  
 The three hundred thirty seventh, a Lefchafferie.  
 The three hundred thirty eighth, a Lefchafferie.  
 The three hundred thirty ninth, a Winter-Boncretien.  
 The three hundred and fortieth, a Winter-Boncretien.  
 The three hundred forty first, a Winter-Boncretien.  
 The three hundred forty second, a Winter-Boncretien.  
 The three hundred forty third, a Virgoulee.  
 The three hundred forty fourth, a Virgoulee.  
 The three hundred forty fifth, an Ambret.  
 The three hundred forty sixth, a Thorn-pear.  
 The three hundred forty seventh, a Thorn-pear.  
 The three hundred forty eighth, an Ambret.  
 The three hundred forty ninth, a Lefchafferie.  
 The three hundred and fiftieth, a Lefchafferie.  
 The three hundred fifty first, a La Fare, or St. Germain.  
 The three hundred fifty second, a Doyennce, or Dean-pear.  
 The three hundred fifty third, a Petit-oin.  
 The three hundred fifty fourth, a Marchioness.  
 The three hundred fifty fifth, a St. Augustin.  
 The three hundred fifty sixth, a Lancia.  
 The three hundred fifty seventh, a Vine-pear.  
 The three hundred fifty eighth, a Petit-oin.

The

The three hundred fifty ninth, a Skellum.  
 The three hundred and sixtieth, a Muscat Robert.  
 The three hundred sixty first, a Skinless pear.  
 The three hundred sixty second, a Dry Martin.  
 The three hundred sixty third, a Dry Martin.  
 The three hundred sixty fourth, a Butter-pear.  
 The three hundred sixty fifth, a Butter pear.  
 The three hundred sixty sixth, a Melrose John.  
 The three hundred sixty seventh, a Melrose John.  
 The three hundred sixty eighth, a Russet.  
 The three hundred sixty ninth, a Robine.  
 The three hundred and seventieth, a Belidery.  
 The three hundred seventy first, a Belidery.  
 The three hundred seventy second, a Double Flower.  
 The three hundred seventy third, a Double Flower.  
 The three hundred seventy fourth, a Double Flower.  
 The three hundred seventy fifth, a Frank Royal.  
 The three hundred seventy sixth, a Frank Royal.  
 The three hundred seventy seventh, an Angober.  
 The three hundred seventy eighth, an Angober.  
 The three hundred seventy ninth, a Donville.  
 The three hundred and eightieth, a Donville.  
 The three hundred eighty first, a first Pound-pear.  
 The three hundred eighty second, a second, Pound-pear.

The Pound-pear, which some name *Gros-rateau-gris*, and others the *Love-pear*, is a very big Pear, as may be guess'd by the weight attributed to it, having a pretty rough Skin, and of a dark Rust colour; its stalk is short, and its Eye or Crown hollow. It makes a very lovely and good *Compote*, whether it be stewed in a Pot, or roasted under the Embers, or any other way prepared.

The *Russet-pear* is called in *Tourain* the *Long-tail'd Muscat* of the End of *Autumn*, and that is the Name under which I first knew it; but the name of *Russet* is more pleasing, which was given it by one of our most illustrious curious Friends, because of its shape, which is much like that of a *Russet*: It is of a very light *Isabella* Colour, that one would take it for a *Dry Martin*; its Pulp is tender and delicate, and its Juice very much sugred, and agreeably perfum'd. Its great fault is, that it comes in with the *Butter-pears*, the *Bergamots*, the *Lansacs*, &c. and those are the Reasons which made me resist the Temptation I otherwise had, to place it better than I have done.

The three hundred eighty third, a Winter Boncretien.  
 The three hundred eighty fourth, a Winter Boncretien.  
 The three hundred eighty fifth, a Winter Boncretien.  
 The three hundred eighty sixth, a La Fare, or St. Germain.  
 The three hundred eighty seventh, a Cuisse Madam, or Lady-thigh.  
 The three hundred ninety eighth, a Cuisse Madam, or Lady-thigh.  
 The three hundred eighty ninth, a Great Blanquet, or White-pear.  
 The three hundred and ninetieth, a Musk'd Blanquet.  
 The three hundred ninety first, a Pendar, or Hanging, or Felons-pear.  
 The three hundred ninety second, a Pendar.  
 The three hundred ninety third, a Robine.  
 The three hundred ninety fourth, a Pastourelle.  
 The three hundred ninety fifth, a Musk'd Boncretien.  
 The three hundred ninety sixth, a Russet.  
 The three hundred ninety seventh, a Bugi.  
 The three hundred ninety eighth, a Portal.  
 The three hundred ninety ninth, a St. Lezin.  
 The four hundredth shall be a Bouchet.

This *Bouchet-pear* is large, round and white, almost like a *Belidery*, and some others of the same Tree are about the bigness of middling *Bergamots*, and others again about that of large *Cassiolets*. Its Pulp is fair and tender, and its Juice sugred. Its Wood is like that of the *Mon-Dieu*, or *My-God Pear*, it is ripe about the middle of *August*.

The *Pendar-pear*, or *Hanging-pear* is a Pear of the End of *September*, in respect of its Pulp, its Juice and its Shape, it might be mistaken for a *Cassiolet*, but it being a little bigger, and

\* Its Description is alter that of the Pound-pear.

\* Its Names and Description.

\* See its description next to that of the Bouchet, after the end of the fourth hundred of trees.

and growing upon a Tree of a different Wood, and ripening besides at a different Season, we may easily see 'tis not the same.

Methinks, 'This distribution should not be ill received, unless it be perhaps by them which, in comparison of a Cat-pear, make no account of the most part of the Pears we so highly prize; and they are the Curious Gentlemen that inhabit along the Banks of the Rhone, who seriously have a very particular esteem for it, and therefore, to content them, I will give

*The four hundred and first place to a fifth Cat-pear.*

*The four hundred and second, a second Cat-pear.*

The Cat-pear,  
its Season and  
Description.

It is a Pear in Season about the middle of *October*, and is shaped almost like a *Dry Martin*, and very near like a Hens Egg, that is to say, 'tis a little rounded a little sharper towards the Stalk, and blunter towards the Head; its Belly is round, but not very big, and falls grossly sloping to the Stalk, which is indifferent long and thick; its Skin is very smooth, fat and dry; its Colour is a very clear or light *Isabella*, much lighter than the ordinary *Isabella* of the Cat-burnt-pear, and of the *Dry Martin*; its Pulp is tender and buttery, and its Juice indifferent sweet; and therefore, in imitation of those Gentlemen that so much admire it, we may make some account of it.

But since our *Butter-pears*, *Bergamots*, *Langsacs*, &c. which come in Season at the same time with it, will hardly suffer it to appear in any Gardens of a midling extent, where there ought to be nothing but what makes a very important Figure, I am willing to have two Trees at least of it, admitted into Plantations of Four hundred and one, and Four hundred and two Trees, and some more of them in greater ones.

The Best de  
Caillou-pear, or  
Ruffet of Anjou;  
its Season and  
Description.

But I am not so well persuaded of the Merit of the *Best de Caillou*, otherwise the *Ruffet of Anjou*: Which is a little Pear in Season in the Months of *December* and *January*, near about the bigness of a *Blanquet* or *White-pear*: The Ground of its colour is yellowish all over full of russet spots; its Pulp is tender, but doughy, with a great deal of stony and earthy Matter, its Juice not very pleasing, and of a taste very near that of *Services*; all these Faults joined with that of the smallness of the Pear, have hindered me from placing it in any Rank till now; but however, because sometimes some of them prove pretty good, and the *Angevin* Gentlemen are so well pleased with them, therefore,

*The four hundred and third Dwarf-tree shall be a first Best de Caillou, and*

*The four hundred and fourth, a second Best de Caillou.*

Thus far, I think, I have employed about therefore sorts of *Pears*, of all the several Seasons, that is to say, Eighteen sorts for *Summer*, Seventeen for *Autumn*, and Six and twenty for *Winter*: And methinks they must needs be very difficult to please that will not be satisfied with such a great number of Sorts, which, as I have plainly enough shewn, are nothing near so good the one as the other: I will subjoin afterward a List of them which I will name indifferent ones, because I neither despise them so much, as utterly to reject them, nor prize them so mightily, as to seek them new Admirers, that so any of those Gentlemen, who knowing what they are, shall retain any affection for them, may preserve and cultivate them if they think good: But as for those that know them not, I durst assure them, They will do well enough if they never trouble their Heads about them at all, or else join them to the List of those that I advise People to exterminate quite out of their Gardens, a List of which later, that is, of the bad ones, shall immediately follow after the List of the indifferent ones.

And so, to continue Planting the following Gardens, into which I will introduce very few more new kinds, unless it be some Baking and Preserving *Pears*, I will place the

*The four hundred and fifth, a Virgoulee.*

*The four hundred and sixth, a Virgoulee.*

*The four hundred and seventh, a Virgoulee.*

*The four hundred and eighth, a Virgoulee.*

*The four hundred and ninth, a Double Flower.*

*The four hundred and tenth, a Frank Royal.*

*The four hundred and Eleventh, an Ambret.*

*The four hundred and twelfth, an Ambret.*

*The four hundred and thirteenth, a Thorn-pear.*

*The four hundred and fourteenth, a Thorn-pear.*

*The four hundred and fifteenth, a Lefchasserie.*

*The four hundred and sixteenth, a Lefchasserie.*

*The four hundred and seventeenth, a Crasanne.*

*The four hundred and eighteenth, a La Fare, or St. Germain.*

*The four hundred and nineteenth, a Winter Boncretien:*

*The four hundred and twentieth, a Winter Boncretien.*

*The four hundred twenty first, a Winter Boncretien.*

*The four hundred twenty second, a Winter Boncretien.*

*The four hundred twenty third, a Winter Boncretien.*

*The four hundred twenty fourth, a Winter Boncretien.*

*The four hundred twenty fifth, a Winter Boncretien.*

*The four hundred twenty sixth, a Butter-pear.*

*The four hundred twenty seventh, a first St. Francis.*

*The four hundred twenty eighth, a second St. Francis.*

'Tis a Pear that is good only baked or preserved; it is indifferent big, and very long, is yellowish, and has a very smooth Skin.

The St. Francis-  
pear described in  
short.

*The four hundred twenty ninth, a St. Augustin.*

*The four hundred and thirtieth, a Ruffelin.*

*The four hundred thirty first, a Muskéd Blanquet.*

*The four hundred thirty second, a Cuisse-Madam, or Lady-thigh.*

*The four hundred thirty third, a Robine.*

*The four hundred thirty fourth, a first Muskéd Orange-pear.*

*The four hundred thirty fifth, a second Muskéd Orange-pear.*

The Muskéd Orange-pear is a Pear of the beginning of *August*; it is indifferent large, flat, pretty much tinged with red, with a longish stalk; its skin is pretty often spotted with little black spots; its pulp is pleasant enough, but has a little touch of Grittiness.

The Muskéd O-  
range-pear de-  
scribed.

*The four hundred thirty sixth, a Melting-pear of Breil.*

*The four hundred thirty seventh, a Dry Martin.*

*The four hundred thirty eighth, a La Fare.*

*The four hundred thirty ninth, a Marchioness.*

*The four hundred and fortieth, an Amadot.*

*The four hundred forty first, a Lanfac.*

*The four hundred forty second, a Messire John.*

*The four hundred forty third, a Verte-longue, or Long-green-pear.*

*The four hundred forty fourth, a Belidery.*

*The four hundred forty fifth, a Doyennee, or Dean-pear.*

*The four hundred forty sixth, a St. Lezin.*

*The four hundred forty seventh, a Vine-pear.*

*The four hundred forty eighth, a Ruffelin.*

*The four hundred forty ninth, an English pear.*

*The four hundred and fiftieth, a Pendar, or Hanging pear.*

*The four hundred fifty first, a Bugi.*

*The four hundred fifty second, a first Gros Fremont.*

*The four hundred fifty third, a second Gros Fremont.*

It is a Pear that is good only baked or preserved; it is indifferent big and long, and of a yellowish colour, and its Compote or Sweet-meat is a little perfumed.

The Gros Fre-  
mont described.

*The four hundred fifty fourth, a Donville.*

*The four hundred fifty fifth, a Louise bonne, or Good Louise.*

*The four hundred fifty sixth, a Colmar.*

*The four hundred fifty seventh, a Portal.*

*The four hundred fifty eighth, a Lemon pear.*

*The four hundred fifty ninth, a Catburnt pear.*

*The four hundred and sixtieth, a Pound pear.*

*The four hundred sixty first, a Pastourelle.*

*The four hundred sixty second, a Virgoulee.*

*The four hundred sixty third, a Virgoulee.*

*The four hundred sixty fourth, a Virgoulee.*

*The four hundred sixty fifth, a Virgoulee.*

*The four hundred sixty sixth, an Ambret.*

*The four hundred sixty seventh, an Ambret.*

*The four hundred sixty eighth, a Thorn-pear.*

*The four hundred sixty ninth, a Thorn-pear.*

*The four hundred and seventieth, a Lefchasserie.*

*The four hundred and seventy first, a Lefchasserie.*

*The four hundred seventy second, a Petit-oin.*

*The four hundred seventy third, a Petit-oin.*

Q

The

The four hundred seventy fourth, a Winter Boncretien.  
 The four hundred seventy fifth, a Winter Boncretien.  
 The four hundred seventy sixth, a Winter Boncretien.  
 The four hundred seventy seventh, a Winter Boncretien.  
 The four hundred seventy eighth, a Sugar-green Pear.  
 The four hundred seventy ninth, a Sugar-green pear.  
 The four hundred and eightieth, a Dry Martin.  
 The four hundred and eighty first, a Bourdon, or Humble-bee-pear.  
 The four hundred and eighty second, a Maudlin pear.  
 The four hundred and eighty third, a Butter-pear.  
 The four hundred eighty fourth, a Musk'd Boncretien.  
 The four hundred eighty fifth, a Spanish Boncretien.  
 The four hundred eighty sixth, a Messire John.  
 The four hundred eighty seventh, a Skinless-pear.  
 The four hundred eighty eighth, a Great Onioner, or Onion-pear.  
 The four hundred eighty ninth, a Musk'd Orange-pear.  
 The four hundred and ninetieth, a Lanfac.  
 The four hundred and ninety first, a Cuisse Madam, or Lady-Thigh.  
 The four hundred ninety second, an Espargne, or Reserve-pear.  
 The four hundred ninety third, a Cassiole.  
 The four hundred ninety fourth, a Summer Boncretien.  
 The four hundred ninety fifth, a Doyenne, or Dean pear.  
 The four hundred ninety sixth, a Boucher-pear.  
 The four hundred ninety seventh, a Bouchet-pear.  
 The four hundred ninety eighth, a Vine-pear.  
 The four hundred ninety ninth, a Winter Bergamot.  
 The five hundredth Dwarf-tree shall be a Bugi.

I begin to be perswaded, That my exactness in well chusing these Five hundred Pear-trees, will give light enough to our new beginners in these Curiosities, to direct them how to order things if any occasions present themselves which require more Trees; and especially there being hardly any need, after so many as we have set down, to employ any more new kinds, they may see, that in every Hundred of augmentation of Dwarf-trees, I ordinarily augment first for the Summer, but about the sixth or seventh part in the Hundred, and that still in diminishing them too proportionably as the Plantations augment in number of Trees; as well, because if there be walling enough to permit it, there is always a part of it allotted for some Pear-trees of that Season, as for Example, for Little Muscats or Musk-pears, Cuisse-Madams or Lady-thighs, Robines, Russlets, &c. which supplies the Defect of Dwarf-trees; or, because those Summer Fruits are to be look'd upon as Fruits that pass off very swiftly, and are but of very small Duration, so that when the Quantity of them is excessive, they do us but very little Honour and Profit.

Add to this, That I seldom fail in Plantations that are any thing considerable, to plant some Standard-trees of the principal of those Sorts in Symetry, as being an assured means to have from them much better Fruit, and in greater plenty too.

In the second place, in respect of the Autumnal Fruits, I have at least the same regard for them, as for those which I have just now spoke of; and I look upon the Bergamot with the same consideration I have always exprest for it, yet I have planted but one or two Dwarf-trees of it in the number of Five hundred, though it be one of the Fruits for the abundance of which, I least pretend to forget to provide: But as all the World knows, 'tis hardly possible to have any competent quantity of these Pears, unless it be against Walls.

It is no very hard Matter to conclude from thence, that doubtless I will make great Wall-Plantations of them, and provided I find conveniences to accommodate my Inclination, that I will place some Trees of them in most Expositions; but in truth to my great regret, I shall Plant but few of them in those to the East and South, as well in favour of the Stone Fruits, for which I think they ought to be reserved, as because of the damage they are subject to receive from the Tiger-bats, from which I cannot at all secure Pears; But, in recompence, I will plant a great many in the Northern Expositions, with which all sorts of Wall Pears, but the Boncretien, agree well enough, and especially in Grounds that are something dry: 'Tis true indeed, they are not so good in that Situation as those that longer enjoy the favourable Aspect of the Father of good Fruits, but the help of a little sugar, allays, at least, a part of their Faults, if it does not entirely rectifie them.

We are going to plant then good store of Bergamots, and I suppose that work already begun

begin as soon as ever we found our selves in a condition to do that Honour to this Queen of Pears, I therefore return now from that Digression, to tell you, that in every Hundreds increase of Dwarf-trees, the number of those that furnish the Fruits for the Autumnal Season, must not be augmented above a seventh or eighth part, because of the small duration of most of them, and their too great aptness to corrupt and rot. But that yet on the other side, the pleasure we take then in devouring a great many of them, and the Season which draws great Companies together, and engages People to make some Abode in the Country, are always as a kind of Mariners Compass, which ought to guide us in the modelling and perfecting our Plantations, and direct us accordingly to Plant a greater or lesser number of Trees.

There remains now then the Winter Fruits, which every where are to make up the main Body of Reserve; so that in every Hundred of Dwarf-trees, they ordinarily should augment about three Quarters of the four. And if my advices have the gift to please you, pray let care be taken to multiply those Sorts last, which I multiply here as 'twere blind-fold, and at a venture.

And now, without engaging my self to draw out a plot at length of Six hundred Dwarf-trees, such a one as I have done above for the preceding Five Centuries, that is, to set down exactly, and one after another, every kind of Fruit, and every single Tree-stock, according to the Order in which every one of them in particular ought to be admitted into the Garden. I shall content my self only to tell you at once, That besides the Five hundred already regulated, I will add to make up the sixth hundred, about Ten Summer Pear-trees, Eighteen Autumnal, and Threescore and twelve Winter ones.

I do not at all wonder, if they who have great Plantations to make, find themselves puzzled about the choice of the number of their Trees; for, I believe, they would be much more perplexed, if they were put to cultivate every particular themselves, without turning off that trouble to their Gardeners, as most of them unluckily enough do. And I confess in good truth, that 'tis a matter that appears to me like an Abyss of an unfathomable Depth; and that I find an unspeakable difficulty in it, when I go about to mark out the Quantities as 'twere with a Compass, in order to regulate the several kinds of Fruits by exact proportions.

Those great Plantations strike me with Terrour, how much accustomed soever I may be to them; nay, and I believe 'tis because I am accustomed to them, that I have so clear a Prospect of the Hazards and Inconveniences with which they circumvent Men, and from thence too it is, that I have so often before my Eyes, and in my Mouth, and at the point of my Pen. *Laudato ingentia vira, exiguum Colito.*

We are apt to think we can never come to be Masters of so much Variety and Plenty of Fruit as we would have, and indeed the Idea of abundance, is one of the most pleasing Fancies in the World, and hard enough to attain in reality, chiefly because of the unkindness of the Seasons: 'Tis in prospect of this abundance, that at first we so much extol the convenience of large Plantations; but besides the Expences we must be at, as well to plant them at first, as to keep them in order afterward, which is very great, and which in this matter ought to be very well considered by us. If it happens, as doubtless it does, that we come at last to compass within a little, what we propos'd to our selves, I am sure, that after all, we are still at least at as much loss as ever, what to do with our Fruits.

It would be now quickly time for me to begin to plant a few Trees of those Fruits, that are at least fit to contribute to the Ornament of the Pyramids; and I think nothing can be said against it, when once we are come to planting of Six or Seven hundred Dwarf-trees of other sorts: And therefore now we may conveniently enough place among them some Summer Boncretiens, otherwise called Gracchols, some Pears called Supremes, some Admiral Pears, some Summer Mouille-Bouchet, or Moist-mouls, some Bellisimes, or Super-fair Pears, some De bouge Pears, some Grallands, some Gigoles, &c. I do but only name them here in passing, that our curious Gentlemen that know them by their Names, may plant some Trees of them, if they please, for as for my self, so long as I shall follow my own Inclination, I shall hardly plant any of them.

Therefore to proceed, as I have begun, I advise that the Ten Summer Fruits of augmentation to be added to make up Six hundred Trees, be

- |                                  |                              |                            |
|----------------------------------|------------------------------|----------------------------|
| 1 great Blanquet, or White-pear. | 2 Robines.                   | 1 Skinless-pear.           |
| 2 Musk'd Summer Boncretiens.     | 1 Espargne, or Reserve-pear. | 1 Pendar, or Hanging-pear. |
| 1 Cassiole.                      | 1 Maudlin-pear.              | 1 Musk'd Orange-pear.      |

And that the Eighteen for Autumn be

- |                         |                |                            |                      |
|-------------------------|----------------|----------------------------|----------------------|
| Two Amadots.            | One Besidery.  | One Dean-pear, or Doyenne. | Three Messire Johns. |
| One Spanish Boncretien. | Three Lanfacs. | One Russlet.               |                      |
| Four Butter-pears,      | One Vine-pear. | One Sugar-green pear.      |                      |

i. e. Commend if you please, large Fields, but chuse but little ones to cultivate.

And the Threecore and Twelve for *Winter*,

Ten <i>Virgoules</i> .	One <i>Petit-ois</i> .
Seven <i>Winter Boncretiens</i> .	One <i>Rouville</i> .
Five <i>Lefchafferies</i> .	Two <i>Colmars</i> .
Five <i>Thorn-pears</i> .	Two <i>Double Flowers</i> .
Five <i>Ambrets</i> .	Two <i>Frank Royals</i> .
Three <i>St. Germain's</i> , or <i>Unknown la Fares</i> .	Two <i>great Musk Pears</i> .
Three <i>Bugis</i> .	Two <i>Dry Martins</i> .
Two <i>Angobers</i> .	Two <i>Marchionnes</i> .
Two <i>Portals</i> .	One <i>Winter Russelet</i> .
Two <i>St. Augustins</i> .	Two <i>St. Francis's</i> .
Two <i>St. Lexins</i> .	One <i>Gros Fremont</i> , or <i>Great Fremont</i> .
One <i>Lemon-pear</i> .	One <i>Pound-pear</i> .
One <i>Befi de Caiffoy</i> .	One <i>Louise-bonne</i> , or <i>Good Louise</i> .
One <i>Douville</i> , otherwise <i>a Calot</i> .	One <i>Pastouelle</i> .

The *Carmelite-pear* described.

I will add to them two *Carmelites*, which are Pears that are large and flat, grey on one side and a little tinged with red on the other, and in some places full of pretty large spots which look as if they were pieces clapt upon them after some cut.

Among all these, we have about Threecore and eleven Trees of Pears good to bake, stew or preserve, besides those of which we may have *Standard-trees*, as *Little Certain*, *Angobers*, *Frank Royals*, &c. which turn to good account on those kinds of Trees.

If we have occasion for Seven hundred *Dwarf-pear-trees*, 'tis but augmenting above the six hundred, much in the same manner and proportion as we did in making up the Five hundred to Six hundred, that is to say, letting the Tenth part in the Hundred be for *Summer* Fruits, and another Tenth part for those of *Autumn*, and the remaining Fourcore for *Winter* Fruits; or else, if we be content with those we had provided before for *Summer* and *Autumn* Fruits, and fill up the whole hundred last added with *Winter* Fruits, we shall find our account well enough that way too; that is to say, in the number of Seven hundred *Dwarf-trees*, we shall have about a Hundred and eighteen of *Summer* Fruits a Hundred thirty two of those of *Autumn*, and Four hundred and fifty of *Winter* Fruits; or else the other way, we shall have a Hundred and fifteen for *Summer*, a Hundred and twelve for *Autumn*, and Four hundred threecore and thirteen for *Winter*: And so in Eight hundred, we may have near a Hundred twenty five for *Summer*, a Hundred and fifty for *Autumn*, and Five hundred twenty five for *Winter*: And in Nine hundred we have about a hundred forty five for *Summer*, a hundred and threecore for *Autumn*, and five hundred fourcore and fifteen for *Winter*, in case that in the numbers of eight and nine hundred, we should think we had not *Summer* and *Autumn* Fruits enough, if we should allow our selves no more Trees of them than we had before in the number of six hundred, which yet are a good reasonable number. And so likewise in the number of a thousand *Dwarf-pear-trees*, we might have about a hundred forty five for *Summer*, a hundred fourcore and five for *Autumn*, and six hundred and threecore and ten for *Winter*.

I shall now make a distribution here of this last number, and finish with what I have to say of *Dwarf-pear-trees*, after I have once more told you that so great a number of *Pear-trees* both for *Summer* and *Autumn* too, frights me, so that if I might follow my own inclination, I should be naturally moved to diminish them, in order to multiply in their room so many more of the *Winter* Fruits: By this every curious person may see what to chuse best for his use.

Those hundred and forty five *Summer Pear-trees* shall be

Nine great <i>Blanquets</i> , or <i>White-pears</i> .	Six <i>Espargues</i> , or <i>Reserve-pears</i> .	Three <i>Bouchep-pears</i> .
Five <i>Musked Blanquets</i> .	Six <i>melting-pears</i> of <i>Bress</i> .	Eight <i>Skinlets-pears</i> .
Five <i>Bourbons</i> .	Six <i>Robines</i> .	Three <i>Salvois's</i> .
Fifteen <i>Musked Boncretiens</i> .	Four <i>Musked Orange-pears</i> .	Seven <i>Muscats</i> .
Six <i>Casselets</i> .	Eight <i>Orange-green-pears</i> .	Fifteen <i>Russelets</i> .
Fifteen <i>Cuisse Madams</i> , or <i>Lady-thighs</i> .	Four great <i>Onionets</i> , or <i>Onion-pears</i> .	Six <i>Pendars</i> , or <i>Hanging-pears</i> .
	Four <i>Mauldin-pears</i> .	
Thirty two <i>Butter Pears</i> .	Fourcore and five <i>Pear-trees</i> for <i>Autumn</i> , shall be	
Twenty <i>Verte longues</i> , or <i>Long-green-pears</i> .	Four <i>Cat Pears</i> .	One <i>Bergamot</i> .
Fifteen <i>Lanacs</i> .	Ten <i>Doyennets</i> , or <i>Dean-pears</i> .	Six <i>Craignes</i> .
Twenty <i>Messire Johns</i> .	Twelve <i>Amadois</i> .	Six <i>Russelets</i> .
Fifteen <i>Besideries</i> .	Four <i>English Pears</i> .	Eight <i>Sugar-green Pears</i> .
	Six <i>Spanish Boncretiens</i> .	Eight <i>Vine Pears</i> .

The

The Six hundred and seventy *Winter Pear-Trees* shall be

Sixcore <i>Virgoules</i> .	Thirty <i>Double Flowers</i> .	Fifteen <i>Angobers</i> .
Seventy <i>Winter Boncretiens</i> .	Twenty four <i>St. Germain's</i> , or <i>Unknown la Fares</i> .	Fifteen <i>Bugis</i> .
Sixty five <i>Ambrets</i> .	Twenty four <i>Dry Martins</i> .	* Four <i>Ryle Pears</i> .
Seventy <i>Lefchafferies</i> .	Eighteen <i>Frank Royals</i> .	* Four <i>Caillot-rosas</i> , or <i>Rosie-pebble</i> .
Sixty five <i>Thorn-pears</i> .		* Four <i>Villain Angou Pears</i> .

I have let my self be perswaded to place the three last kinds of Pears, though I have no great esteem for them, the abundance of Fruit they produce, having wrought upon me in their Favour; besides, that for People that happen not to be furnished with other Fruits, these Pears have a Juice that is pretty well sugred, and not very unpleasant to those that love a *Rosie Tasse*.

The *Rosie Pear* is indifferent large, flat and round; its stalk is very long and small, and its pulp eas short.

The *Caillot-Roset*, or *Rosie Pebble-pear*, otherwise the *Rosie-water-pear*, is almost of the colour, bigness and shape of an ordinary *Messire John*, but that it is a little rounder, and has a very short stalk, and set hollow like that of an Apple, and has a short eating Pulp.

The *Villain-pear* of *Angou*, called otherwise the *Tulipid* and *Bigarade*, or *Motley-pear* is large, flat and of a yellowish grey colour, and has a short-eating Pulp.

I will add also two *Vine-trail'd Pear-trees*. The Name of this *Pear* gives a sufficient Description of it; its stoniness with its drincles, makes it be slighted, and its great Pertume makes it be esteemed by those that love Fruits that are strongly musked: It is yellow in Colour, and of a competent bigness. Next shall be

Eight <i>Portals</i> .	Twelve <i>Douville's</i> .	Five <i>Lemon-pears</i> .
Fifteen <i>St. Lexins</i> .	Twelve <i>Marchionnes</i> .	Four <i>Befi de Caiffoy</i> .
Eight <i>great Musk-pears</i> .	Eight <i>St. Augustins</i> .	Six <i>Great Fremonts</i> .
Eight <i>Colmars</i> .	[ <i>Louise</i> Eight <i>Petit-ois</i> .	Six <i>Pound Pears</i> .
Twelve <i>Louise-bonnes</i> , or <i>Good</i> .	Eight <i>Rouville's</i> .	Six <i>St. Francis Pears</i> .
Eight <i>Pastouells</i> .	Eight <i>Carmelite-pears</i> .	Ten <i>Winter Russelets</i> .

And in this number we have a Hundred and one Trees of Pears that are only to bake or preserve, &c. Besides those which, as we have said, are good both raw and otherwise.

I conclude with a little Reflection that concerns such a curious Gentleman that is so happy as to see himself Master of a Thousand *Dwarf-pear-trees*, or that proposes to plant so many; and I demand of him, as soon as every one of those Trees begin to yield him a little Fruit, though it should not be to the quantity of above Twelve Pears for each Tree, which is a very moderate number, I ask, I say, this curious Person, how he can dispose of those Twelve thousand Pears, unless he give away a good part of them in presents, or sell them, or make Perry of them, &c. For as for my part, I confess in good earnest, That so great a quantity terrifies me so as to vex me, or at least to move my pity, as certainly knowing, that at least the half of them will be spoiled, &c.

### C H A P. III.

#### Of *Standard Pear-trees* to Plant.

There is nothing near so much Reason to oblige me to make so nice a Discussion about placing *Standard Pear-trees*, as I was about disposing of the *Dwarf Pear-trees*: for they do not all accommodate little Gardens, as these latter do; the Shade of great Trees being destructive to every thing else we might plant there. Add to that, that all the World are particularly desirous to have air round about their Houses, and none care to suffer any thing near them that may hinder its free access; and that's one of the principal Reasons which makes every one desire at least little Gardens, when they cannot have great ones.

We will therefore plant no *Standard Trees* any where but in great Gardens, and there too we will plant but a small number, which ordinarily amounts not to above one Tree for every Square in a Kitching Garden. I have used my self to two several Methods in this Matter, which succeed not amiss, one is to plant them all along the sides of those great Alleys or Walks that cross the Garden, and always at a good distance from any Walls, excepting those of the North; and the other is, to place them in the midst of the Squares, that is to say, one in every Square.

In the first manner particularly, because the greatest part of their shadow falls commonly into the Walks, none of the Trees can do any harm to the little Plants growing underneath them, nor to the good Wall Trees which are far enough off of them: And in the second manner, there is nothing to intercept or cloud the light, because the Squares extending ordinarily at least Threefold, or Threefold and twelve Foot every way, and being separated from one another by some Alleys or Walks, the Standard Trees in them will be at a very considerable distance one from another, and the number of those Squares being not very great, the number of the Standard Trees in them can be but moderate neither, there being very few Kitchen-Gardens so proportioned, and so designed out, as we have expressed, that can have above Thirty such Trees.

Now for this purpose, I either chuse Trees of those sorts of Fruits which are not very big, and yet are of great increase, and are good when they fall, that is to say, of some Summer Fruits, because their smallness preserves them from bruising, and their ripeness which loosens them from the Tree, makes them fit to be eaten presently with pleasure, when any of them happen to be battered in falling.

Or else I chuse those kinds which hold fast by their Stalks, and such whose Fruits are very hard in themselves, as are the small Winter Fruits and Baking-pears; so that they are not easily shaken down by Winds, nor when they fall so apt to be much endamaged thereby.

Among the Summer-Fruits proper to be planted in the form of Standard-trees, I do not comprehend the little Muscat-pear, though for its bigness and season it might seem fitter than any other; no, the Canker which is apt to Seize on its Wood, and quite spoil it, hinders me to my great regret from planting any Trees of it in this fashion; But that which I most willingly plant in this manner, is first, of Summer-Fruits (mark here the order of my choice) The *Russlet*, the *Cuisse-Madam*, or *Lady-Thigh*, the *Great Blanquet*, or *White-pear*, the *Musked-Blanquet*, the *Musked-Summer-Boncretien*, the *Bourdon*, or *Humble-Bee pear*, the *Musked-Robert*, the *Pendar*, or *Hanging-pear*, the *Melting-pear* of Breil, and in a very large Plantation, I would add too, some Summer-Boncretiens, some Admiral Pears, &c. For the Fruits of Autumn, those which I chuse, are the *Lansac*, *Vine-pears*, *Russelins*, and perhaps, some *Besi de Caisjy-trees*, and in fine, for Fruits to Bake, Preserve, &c. I will chuse the little *Certeau*, the *Frank-Royal*, the *Angober*, the *Donville*.

There we have about twenty four sorts of Standard Pear-trees to plant prosperously enough in our Gardens; But because in Important places, as for example, in fine Kitching-Gardens, Baking and Preserving Fruits are not considerable enough to be allowed any room, and because (as it is expedient for all them that conveniently can) we may have some of them in the separate Orchards, designed only for Fruit, together with all sorts of *Baking and Preserving Pears*, with *Cheer*, &c. and *Apples*, &c. best planted apart in separate Orchards. *Fenouillet*, or *Femel-Apple*, *Courpendu*, or *Shore Hung*, or *Shore Stalked Apples*, &c. with some good sorts of *Plums*, that is to say, of *Damaik Plums* of all sorts, of *Mirabellets*, *St. Catherine's*, *Diapred Damask*, &c. and lastly with *Mulberry-trees*, *Almond-trees*, *Azerol*, or *Garden Hawth-trees*, &c. Therefore I say, since for these Reasons, Fruits for Baking, &c. may without any dishonour to them, be planted elsewhere, far off from our Kitching-Gardens, we should in their stead, particularly Multiply some Trees of the principal sorts of our Summer-Fruit. I know the voice of all the World, as well as mine own will presently give the first choice to the *Russlet-pears*; so that we shall not think much to have at least four great Trees of them to one of each of the other sorts: The *Russelin*, the *Lansac*, the *Ambret*, and the *Dry Martin*, are likewise Trees that require each of them to be doubled before we double the other kinds. A Summer Pear-tree that has been planted ten or twelve Years, is capable of yielding so great a quantity of Fruit of its kind, that 'twill be all we can do to spend them before the Rottenness that follows close after their Ripeness, makes them good for nothing: And therefore, when we are contriving Plantations of Fruit-trees, we should still remember when we intermix in them any Standard-trees, that we must proportionably diminish the number of Dwarf-trees, which we should otherwise be obliged to have of those same kinds.

Methinks 'tis not amiss to add here this Caution, that in respect of these Standard-trees, it is good in planting them, to leave them some of the branches of their tops which they had when in the Nursery Garden, because they will bear Fruit so much the sooner, and because the height of their Trunks is not so exactly regulated as that of the Dwarf-trees, whether that height begin a foot higher or lower, their shape will be never the less comely for that, and it is always a considerable advantage, this sort of Trees may be made to afford us of advancing their Fruitfulness, which we can hardly ever draw from the Dwarf-trees.

I

I have hitherto examined only the Conduct we are to observe in disposing the good Pear-trees, to have as many of them in our Gardens, as 'tis possible, as well in the form of Dwarf, as Standard-trees: But I have not yet spoken of those great Boncretien Pear-trees they have in the Courts of some Houses in many Provinces in the hotter Climates, nor of some other more common Pear-trees which they have in other parts, in other Courts.

Nor have I yet spoken any thing of the great Pear plantations, planted for the making of Perry in those places where Vines cannot prosper. As to the two first points, because I have nothing to say to them, as being of no manner of consequence, but only barely for the pleasure of some particular Persons, I leave it wholly to each person to do in them what he shall find best for his own satisfaction; for the success he shall meet with may serve him for a Rule.

However, 'tis convenient to advertise you, that in places, which we say, are much exposed to the Secular Arm, we ought to have this fore-cast, not to plant any Fruit there that is eatable whilst on the Tree, otherwise 'tis certain, all the Fruit that will come to the Owner from thence will be only a great deal of Vexation, and little else.

As for what concerns the plantations of Pear-trees or Apple-trees designed for the making of Cyder or Perry; I shall content my self with only telling you, that in them, the Trees are planted at threefold, or threefold and twelve foot, one from another, because that proportion observed, hinders not the Grounds in which they grow, at least for several Years together, from being sown Yearly with good Corn, the Plowing up, and other Culture used for the latter, extremely contributing to the well cultivating of the other: I leave what is more to be said to this Article, to the Discussion of those to whom those Liquors are necessary, or at least very convenient, or which as passionately love them as I do good Fruits which are the chief delights of the Nobility and Gentry.

It is now time to examine what sorts of Pear-trees we shall plant against Walls, I know very well there is not any sort of them which that Situation would not very well accommodate by contributing much to the largeness of their Fruit, and the certainty of their bearing and bringing their productions to perfection, when the spiteful Tiger-Babbs will give them leave to do it; But I likewise no less certainly know, that that there are some of them which stand so much in need of the assistance of the Wall, that they cannot live and thrive without it. And we have hinted in several places in the foregoing part of this Treatise, that the Bergamots particularly lay under this necessity, and the little Muscat-pears still more than they: The Wall is further indispensably requisite for the raising of well Coloured Boncretiens. But because if we have never so few Walls exposed to a kindly Sun, we ought to have so much regard to them as to employ them as usefully as they deserve, and according to the importance of the Fruits that challenge place there, I think I ought to treat of the Pears that may be planted in that Situation, before I come to treat particularly of the order which is to be observed for the filling up every Wall with all sorts of good Fruits, as well as 'tis possible to fill them; and that is the order I proposed to my self at the very beginning of this Treatise: After I have drawn therefore a particular List of the first Five Hundred Dwarf-pear-trees which I have placed here a little above, and after I have told you in particular, which, in my opinion, are the Good-pears, which the Indifferent ones, and lastly which are they that are so bad, that I would advise no body to plant them at all, I will conclude this Chapter, with informing you what other Fruits, besides Pears, prosper well upon Dwarf-trees, and then proceed to speak of all sorts of Wall-Fruits, and of the method of disposing them, in a separate Discourse.

A List of the First Five Hundred Dwarf-Trees, according to the Order in which I have placed them in the above premised Discourse, in which I have set down in what Months their Fruits are good to Eat, and expressed the Pages, in which are contained their several Descriptions.

1. Dwarf-tree a first Winter-Boncretien, a Pear in the Months of February and March, Described pag. 79
2. A first Butter-pear to be Eaten about Mid-September and the beginning of October, Described pag. 82
- Or a first Bergamot, another of the Middle of September, and beginning of October, Described pag. 83

3. A

What Summer-Pear Standards are fit to be Planted.

What Autumnal ones, and what Winter ones.

Baking and Preserving Pears with Cherries, &c. and Apples, &c. best planted apart in separate Orchards.

Standards to be much less Trimmed in their Heads than Dwarf-trees, to make them bear so much the sooner.

\* That is, places near High-ways, where many People pass.

To what Pear-Trees the Wall is absolutely necessary.

3. A First Virgoulee, a Pear of *November, December and January*, Described pag. 45, 85
4. A First Lefchallerie, a Pear of *November, December and January*, Described pag. 85, 86
5. A First Ambret, a Pear of *November, December and January*, Described pag. 85, 86
6. A First Winter Thorn-pear eatable in *November, December, and Jan.* Described pag. 86, 90
7. A First Ruffelet, a Pear of *August and September*, Described pag. 91
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9. A First Petit-Oin, a Pear of *November and December*, Described pag. 94
10. A First Crafane, a Pear of *November*, Described pag. 93
11. A First St. *Germain*, otherwise called an Unknown La Fare, a Pear of *November, December and January*, Described pag. 93, 94
12. A First Colmar, a Pear of *November, December, January and February* Described pag. 94
13. A First Louise-Bonne, or Good-Louise, a pear of *November and December*, Described pag. 95
14. A First Verte-Longue, or Long-green-pear, eatable about *Mid-October*, Described pag. 95
15. A First Marquise, or Marchionels, a pear of the Month of *October*, Described pag. 94
16. A First St. *Augustin*, a pear of the End of *December*, Described pag. 98
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18. A Second Butter-pear.
19. A First Cuiffe-Madam, or Lady-thigh, a pear of the entrance of *July*, Described pag. 100
20. A First Great-Blanquet, or White-pear, ripe in the beginning of *July*, Described pag. 100
21. A First Muscat-Robert, a pear of the Middle of *July*, Described pag. 101
22. A Second Verte-Longue, or Long-green-pear.
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25. A third Butter-pear.
26. A second Virgoulee.
27. A second Lefchallerie.
28. A second Thorn-pear.
29. A second Ambret.
30. A second St. *Germain*.
31. A second Ruffelet.
32. A second Crafane.
33. A second Robin.
34. A second Cuiffe-Madam, or Lady-thigh.
35. A second Colmar.
36. A second Petit-oin.
37. A third Winter-Boncretien:
38. A fourth Butter-pear.
39. A third Virgoulee.
40. A third Lefchallerie.
41. A third Thorn-pear.
42. A third Ambret.
43. A third St. *Germain*.
44. A first Flowered Muscat, a pear of *Mid October*, described pag. 104
45. A third Verte-Longue, or Long-green-pear.
46. A third Crafane.
47. A second Marchionels
48. A second St. *Augustin*.
49. A fourth Winter-Boncretien.
50. A fourth Virgoulee.
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55. A fifth Virgoulee.
56. A fourth Lefchallerie.

57. A fourth Thorn-pear.
58. A fourth Ambret.
59. A fourth St. *Germain*.
60. A first Longtail'd-Blanquet, a *July* pear described pag. 100
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62. A first Orange-green-pear, ripe in the beginning of *August*, described pag. 104
63. A fourth Verte-Longue, or Long-green-pear.
64. A sixth Winter-Boncretien.
65. A sixth Virgoulee.
66. A third Colmar.
67. A fourth Crafane.
68. A fourth Marchionels.
69. A second Louise-Bonne, or Good Louise.
70. A fifth Thorn-pear.
71. A fifth Ambret.
72. A fifth Lefchallerie.
73. A fifth St. *Germain*.
74. A fifth Verte-Longue, or Long-green-pear.
75. A first Doyennee, or Dean-pear eatable in *September and October*, and described pag. 104
76. A first Bés de la Motte, a pear of the end of *October*, described pag. 104
77. A sixth Butter-pear.
78. A second Great Blanquet.
79. A third Louise-Bonne, or Good Louise.
80. A second Long-rail'd Blanquet.
81. A seventh Winter-Boncretien.
82. A sixth Thorn-pear.
83. A sixth Lefchallerie.
84. A sixth Ambret.
85. A seventh Virgoulee.
86. A sixth Verte-Longue, or Long-green-pear.
87. An

87. An eighth Virgoulee.
88. A seventh Thorn-pear.
89. A seventh Ambret.
90. A seventh Lefchallerie.
91. A sixth St. *Germain*.
92. A fourth Colmar.
93. A ninth Virgoulee.
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96. A fourth Petit-oin.
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98. An eighth Thorn-pear.
99. An eighth Ambret.
100. A tenth Virgoulee.
101. An eleventh Virgoulee.
102. An eighth Lefchallerie.
103. A ninth Thorn-pear.
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106. A first Colmar.
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108. A seventh Verte-Longue, or Long-green-pear.
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124. A first Bugi, a pear of *February and March*, described pag. 107
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128. A first Great Onionet, or Onion pear, ripe in the Middle of *July*, described pag. 108
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132. An eleventh Thorn-pear.
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138. A fourth Robin.
139. A fifth Crafane.
140. An eighth St. *Germain*.
141. An eighth Colmar.
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143. A fourteenth Virgoulee.
144. A tenth Lefchallerie.
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150. A first Besidery, a pear of *October and November*, described pag. 108
151. A tenth Winter Boncretien.
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154. An eleventh Lefchallerie.
155. A twelfth Thorn-pear.
156. A tenth Butter-pear.
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158. A first Ronville, a pear of *January*, described pag. 108
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160. A fifth Robin.
161. A sixth Crafane.
162. A sixth Marchionels.
163. A seventh Petit-oin.
164. A third Cuiffe-Madam, or Lady-thigh.
165. A ninth Colmar.
166. An eleventh Winter Boncretien.
167. A second Musk Summer Boncretien.
168. A second Muscat-Robert.
169. A third Skinless-pear.
170. An eleventh Butter-pear.
171. A second Maudlin-pear.
172. A seventeenth Virgoulee.
173. A twelfth Lefchallerie
174. A second Bourdon.
175. A third Dry Martin.
176. A third Bugi.
177. A twelfth Winter Boncretien.
178. A ninth Verte-Longue, or Long-green-pear.
179. A second Doyennee, or Dean-pear.
180. A first Salviati, a pear of *August and September*, described pag. 109
181. A twelfth Butter-pear.
182. An eleventh Ambret.
183. An eighth Petit-oin.
184. A ninth St. *Germain*.
185. A tenth Colmar.
186. A twelfth Ambret.
187. A second Lanfac.
188. A seventh Crafane.
189. A thirteenth Winter Boncretien.

190. A eighteenth Virgoulee.  
 191. A second Bési de la Mott.  
 192. A sixth Ruffelet.  
 193. A sixth Robin.  
 194. A first Cassiolet, ripe in the Middle of August, and described pag. 100  
 195. A first Unknown Chaineau, a pear of the Middle of September, not described.  
 196. A first little Muscat, a pear of the beginning of July, described pag. 99  
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 200. A third St. Augustin.  
 201. A fourteenth Winter Boncretien.  
 202. A fifteenth Winter Boncretien.  
 203. A sixteenth Winter Boncretien.  
 204. A seventeenth Winter Boncretien.  
 205. An eighteenth Winter Boncretien.  
 206. A nineteenth Winter Boncretien.  
 207. A first Winter Bergamot.  
 208. A nineteenth Virgoulee.  
 209. A twentieth Virgoulee.  
 210. A twenty first Virgoulee.  
 211. A thirteenth Lefchafferie.  
 212. A fourteenth Lefchafferie.  
 213. A thirteenth Ambret.  
 214. A fourteenth Ambret.  
 215. A thirteenth Thorn-pear.  
 216. A fourteenth Thorn-pear.  
 217. An eighth Crasane.  
 218. A ninth Petit-oin.  
 219. A tenth St. Germain.  
 220. An eleventh St. Germain.  
 221. A seventh Marchioness.  
 222. An eighth Marchioness.  
 223. A fourth Dry Martin.  
 224. A fifth Dry Martin.  
 225. A thirteenth Butter-pear.  
 226. A fourteenth Butter-pear.  
 227. A seventh Ruffelet.  
 228. An eighth Ruffelet.  
 229. A third Muskéd Summer Boncretien.  
 230. A third Messire-John.  
 231. A seventh Robine.  
 232. A tenth Verte-long, or Long-green-pear.  
 233. An eleventh Verte-longue.  
 234. A second Cassiolet.  
 235. A second Lanfac.  
 236. A fourth Cuisse-madam, or Lady-thigh.  
 237. A fifth Lady-thigh.  
 238. A third Longtail'd Blanquet.  
 239. A first Muskéd Blanquet; a Pear of the beginning of July, described pag. 109  
 240. A second Orange green-pear.  
 241. A second Besidery.  
 242. A third Espargne, or Reserve-pear.  
 243. A fourth Messire John.  
 244. A third Sucré-verd, or Sugar green-pear.  
 245. A twentieth Winter Boncretien.  
 246. A twenty first Winter Boncretien.  
 247. A twenty second Winter Boncretien.  
 248. A twenty third Winter Boncretien.  
 249. A twenty second Virgoulee.  
 250. A twenty third Virgoulee.  
 251. A twenty fourth Virgoulee.  
 252. A fifteenth Ambret.  
 253. A sixteenth Ambret.  
 254. A fifteenth Thorn-pear.  
 255. A fifteenth Thorn-pear.  
 256. A fifteenth Lefchafferie.  
 257. A sixteenth Lefchafferie.  
 258. A seventeenth Lefchafferie.  
 259. A sixth Dry Maruin.  
 260. A tenth Petit-oin.  
 261. A twelfth St. Germain.  
 262. A fourth St. Augustin.  
 263. A ninth Marchioness.  
 264. A fifteenth Butter-pear.  
 265. A first Amadot, a Pear of November and December.  
 266. A first Spanish Boncretien, eatable about the middle of November and beginning of December, described pag. 109  
 267. A fifth Louise-bonne, or Good Louise.  
 268. A third Doyennee, or Dean-pear.  
 269. A third Portal.  
 270. A sixth Louise-bonne, or Good Louise.  
 271. A third Besidery, a good baking Pear.  
 272. A fourth Besidery.  
 273. A second Double Flower.  
 274. A third Double Flower.  
 275. A second Frank Royal.  
 276. A third Frank Royal.  
 277. A second Angober.  
 278. A third Angober.  
 279. A first Donville.  
 280. A second Donville.  
 281. An eighth Robine.  
 282. A ninth Robine.  
 283. A first St. Lezin, a March Pear.  
 284. A seventh Louise-bonne, or good Louise.  
 285. An eleventh Colmar.  
 286. A ninth Crasane.  
 287. A sixteenth Butter-pear.  
 288. A second Winter Bergamot.  
 289. A fourth muskéd Summer Boncretien.  
 290. A twelfth Verte-longue, or Long-green-pear.  
 291. A second Spanish Boncretien.  
 292. A tenth Crasane.  
 293. A second Vine-pear.  
 294. A first melting Pear of Brest, an August Pear.  
 295. A second Muskéd Blanquet.  
 296. A second Salviati.  
 297. A first Summer Satin-pear.  
 298. A third Muscat Robert.  
 299. A third Bourdon.

300. A fourth Skinless-pear.  
 301. A fourth Bugi.  
 302. A fifth Bugi.  
 303. A sixth Bugi.  
 304. A seventh Bugi.  
 305. An eighth Bugi.  
 306. A ninth Bugi.  
 307. A first Pastourelle described pag. 110  
 308. A second Pastourelle.  
 309. A third Pastourelle.  
 310. A first English-pear described pag. 110  
 311. A first Cat-burnt-pear described Ibid.  
 312. A first Winter Lemon-pear described Ibid.  
 313. A first Winter Ruffelet described Ibid.  
 314. A second Summer Satin-pear.  
 315. A second English-pear.  
 316. A second Cat-burnt pear.  
 317. A fifth Muskéd Summer Boncretien.  
 318. A seventh Dry Martin.  
 319. An eighth Dry Martin.  
 320. A twelfth Colmar.  
 321. An eighth Good Louise.  
 322. A thirteenth Long-green pear.  
 323. A fourteenth Long-green pear.  
 324. A twenty fifth Virgoulee.  
 325. A twenty sixth Virgoulee.  
 326. A twenty seventh Virgoulee.  
 327. A twenty eighth Virgoulee.  
 328. A twenty ninth Virgoulee.  
 329. A seventh Ambret.  
 330. An eighteenth Ambret.  
 331. A nineteenth Ambret.  
 332. A seventeenth Thorn-pear.  
 333. An eighteenth Thorn-pear.  
 334. A nineteenth Thorn-pear.  
 335. An eighteenth Lefchafferie.  
 336. A nineteenth Lefchafferie.  
 337. A twentieth Lefchafferie.  
 338. A twenty first Lefchafferie.  
 339. A twenty fourth Winter Boncretien.  
 340. A twenty fifth Winter Boncretien.  
 341. A twenty sixth Winter Boncretien.  
 342. A twenty seventh Winter Boncretien.  
 343. A thirtieth Virgoulee.  
 344. A thirty first Virgoulee.  
 345. A twentieth Ambret.  
 346. A twentieth Thorn-pear.  
 347. A twenty first Thorn-pear.  
 348. A twenty first Ambret.  
 349. A twenty second Lefchafferie.  
 350. A twenty third Lefchafferie.  
 351. A thirteenth St. Germain.  
 352. A fourth Doyennee, or Dean-pear.  
 353. An eleventh Petit-oin.  
 354. A tenth Marchioness.  
 355. A fifth St. Augustin.  
 356. A fourth Lanfac.  
 357. A third Vine-pear.  
 358. A twelfth Petit-oin.  
 359. A first Ruffelet described 111  
 360. A fourth Muscat Robert.  
 361. A fifth Skinless pear.  
 362. A ninth Dry Martin.  
 363. A tenth Dry Martin.  
 364. A seventeenth Butter-pear.  
 365. An eighteenth Butter-pear.  
 366. A fifth Messire John.  
 367. A sixth Messire John.  
 368. A ninth Ruffelet.  
 369. A tenth Robine.  
 370. A fifth Besidery.  
 371. A sixth Besidery.  
 372. A fourth Double Flower.  
 373. A fifth Double Flower.  
 374. A sixth Double Flower.  
 375. A fourth Franc-Royal.  
 376. A fifth Franc-Royal.  
 377. A fourth Angober.  
 378. A fifth Angober.  
 379. A third Donville.  
 380. A fourth Donville.  
 381. A first Pound-pear, being a pear of Novem. good to Bake, described pag. 111  
 382. A second Pound-pear.  
 383. A twenty eighth Winter Boncretien.  
 384. A twenty ninth Ditto.  
 385. A thirtieth Ditto.  
 386. A fourteenth St. Germain.  
 387. A fifth Cuisse-Madam, or Lady-thigh.  
 388. A sixth Ditto.  
 389. A third great Blanquet.  
 390. A third Muskéd Blanquet.  
 391. A first Pendar or Hanging-pear described. pag. 111  
 392. A second Ditto.  
 393. An eleventh Robine.  
 394. A fourth Pastourelle.  
 395. A sixth muskéd Summer Boncretien.  
 396. A tenth Ruffelet.  
 397. A tenth Bugi.  
 398. A fourth Portal.  
 399. A second St. Lezin.  
 400. A first Bouchet, a pear of the middle of August described pag. 111  
 401. A first Cat-burnt-pear, being a pear of the middle of October described p. 112  
 402. A second Ditto.  
 403. A first Bési de Caisloy, a pear of December and January described pag. 112  
 404. A second Ditto.  
 405. A thirty second Virgoulee.  
 406. A thirty third Ditto.  
 407. A thirty fourth Ditto.  
 408. A thirty fifth Ditto.  
 409. A seventh Double Flower.  
 410. A sixth Franc-Royal.  
 411. A twenty second Ambret.  
 412. A twenty third Ditto.  
 413. A twenty second Thorn-pear.  
 414. A twenty third Ditto.  
 415. A twenty fourth Lefchafferie.  
 416. A twenty fifth Ditto.  
 417. An eleventh Crasane.

418. A fifteen St. Germain.
419. A thirty first Winter Boncretien.
420. A thirty second *Dicto*.
421. A thirty third *Dicto*.
422. A thirty fourth *Dicto*.
423. A thirty fifth *Dicto*.
424. A thirty sixth *Dicto*.
325. A thirty seventh *Dicto*.
426. A nineteenth Butter-pear.
427. A first St. Francis, being a good Baking pear, described pag. 113
428. A second *Dicto*.
429. A sixth St. Augustin.
430. A second Ruffelin.
431. A fourth Muské Blanquet.
432. A seventh Cuiffe-madam, or Lady-thigh.
433. A twelfth Robine.
434. A third Salviati.
435. A first musked Orange-pear, being a pear of the beginning of *August*. 113
436. A second melting Pear of *Brest*.
437. An eleventh Dry Martin.
438. A sixteenth St. Germain.
439. An eleventh Marchionefs.
440. A second Amador.
441. A fifth Lanfac.
442. A seventh Messire John.
443. A fifteenth Green-long-pear.
444. A seventh Besidery.
445. A fifth Doyennec, or Dean-pear.
446. A third St. Lexin.
447. A fourth Vine-pear.
448. A third Ruffelin.
449. A third *Engliff*-pear.
450. A third Pendar, or Hanging pear.
451. An eleventh Bugi.
452. A first great Fremont, a baking pear, described pag. 113
453. A second *Dicto*.
454. A fifth Donville.
455. A ninth Louise-bonne, or good Louise.
456. A thirteenth Colmar.
457. A fifth Portal.
458. A second Winter Lemon-pear.

459. A third Cat-burnt-pear.
460. A third Pound-pear.
461. A fifth Pastourelle.
462. A thirty sixth Virgoulee.
463. A thirty seventh *Dicto*.
464. A thirty eighth *Dicto*.
465. A thirty ninth *Dicto*.
466. A twenty fourth Ambret.
467. A twenty fifth *Dicto*.
468. A twenty fourth Thorn-pear.
469. A twenty fifth *Dicto*.
470. A twenty sixth Lefchafferie.
471. A twenty seventh *Dicto*.
472. A thirteenth Petit-oin.
473. A fourteenth *Dicto*.
474. A thirty eighth Winter Boncretiea.
475. A thirty ninth *Dicto*.
476. A fourtieth *Dicto*.
477. A fourth first *Dicto*.
478. A fourth Sucré vert, or Sugar-green pear.
479. A fifth *Dicto*.
480. A twelfth Dry Martin.
481. A fourth Bourdon.
482. A second Maudlin-pear.
483. A twentieth Butter-pear.
484. A seventh musked Summer Boncretien.
485. A third Spanish Boncretien.
486. A seventh Mellire John.
487. A sixth Skinless pear.
488. A second Great Onionet.
489. A second musked Orange-pear.
490. A sixth Lanfac.
491. An eighth Cuiffe-madam.
492. A third Espargne, or Reserve-pear.
493. A third Caffolet.
494. An eighth Summer musked Boncretiea.
495. A sixth Doyennec, or Dean-pear.
496. A second Bouchet-pear.
497. A third *Dicto*.
498. A fifth Vine-pear.
499. A third Winter Bergamat.
500. A twelfth Bugi.

Not to tire the Reader too much, I have only made a List of the first five Hundred Pear-trees, the rest besides being all only the same kinds ready above set down, excepting only these five that follow.

The Carmelite, being a *March* pear, described pag. 115  
 The Rose-pear Described. pag. 115  
 The Caillot-rosat, or Rosie-pebble, or Rose-water pear, being a Pear of the Months of *August* and *September*, described. p. 115  
 The Villain-pear of *Arjon*, an *October* pear described pag. 115  
 And the Thick-tail pear, an *October* pear described pag. 115

A List

## A List or Catalogue of all sorts of Pears, both Good, Indifferent, and Bad ones.

### Good Pears.

1. THE Bergamat, a Pear of the middle of *September*.
2. The Winter Boncretien, *February* and *March*.
3. The Butter Pear, middle of *September*, and beginning of *October*.
4. The Virgoulee, *November*, *December*, and *January*.
5. The Lefchafferie, the same Months.
6. The Ambrett, the same Months.
7. The Thorn-Pear, the same Months.
8. The Ruffelet, *August* and *September*.
9. The Robine, the same Months.
10. The Petit-Oin, *November* and *December*.
11. The Crafsne, *November*.
12. The St. Germain, otherwise, the unknown *La Fare*, *November*, *December*, and *January*.
13. The Colmar, the same Months.
14. The Louise-Bonne, or good Louise, *November*, and *December*.
15. The Verte-Longue, or Long-Green-Pear, middle of *October*.
16. The Marchionefs, *October*.
17. The St. *Augustine*, end of *December*.
18. The Messire-John, middle of *October*.
19. The Cuiffe-Madam, or Lady-thigh, entrance of *July*.
20. The Great Blanquet, the same Months.
21. The Muscat-Robert, otherwise called, the Queen-Pear, the Amber-Pear, the Great Muské-Pear of *Coué*, the Princess, in *Poitou*, the Maiden of *Flanders*, and the Maiden of *Xamronge*, is ripe in the middle of *July*.
22. The Skinless-Pear, about the Twentieth of *July*.
23. The Flower'd-Muscat, middle of *October*.
24. The Long-tail'd-Blanquet, *July*.
25. The Orange-Green-Pear, *August*.
26. The Besi de la motte, end of *October*.
27. The Dry Martin, middle of *November*.
28. The Bourdon, or Humble-Bee-Pear, end of *July*, and beginning of *August*.
29. The Sugar-Green, or Green-Sugar-Pear, or Siacre-vert, end of *October*.
30. The Lanfac, in the same time.
31. The Maudlin-Pear, entry of *July*.
32. The Espargne, or Reserve-Pear, end of *July*.
33. The Bugi, *February* and *March*.
34. The Little Blanquet, or White Pear.
35. The unknown Chaineau, *September*.
36. The Little Muscat.
37. The Portal, *January*, and *February*.
38. The Green-Satin-Pear, *January*.
39. The Red Admiral, *July*.
40. The Vine, or Damfel-Pear, middle of *October*.
41. The Non-common, or Dead-Mens-Pear, *November*.
42. The Great Musk-Pear, *January*.
43. The Almain, or German-Muscat, *March*, and *April*.
44. The Amadotte, *November*, and *December*.
45. The St. Lexin, *March*.
46. The melting Brest-Pear, *August*.
47. The Ruffelin, *October*.
48. The Pendar, or Hanging-Pear, *September*.
49. The Caffolette, or Friolet, or Green Muscat, or the Eche Frion.
50. The Ronville, or Martin-fire, *January*.

### Indifferent Pears.

1. THE London-Pear, *November*.
2. The Brown Orange-Pear, or Monsieur-Pear, *August*, and *September*.
3. The Muské Summer-Boncretien, or Graccioli, at the same time.
4. The Doyennec, or Dean-Pear, or St. Michael's Pear, middle of *September*, and *October*.
5. The Cat-burnt-Pear, *October*, and *November*.
6. The *Engliff*-Pear, *September*, and *October*.
7. The Ambrette of Bourgeuil, or Gra-ville, thirteenth of *October*.
8. The Besidery, a Baking-Pear, *October*.
9. The Pastourelle, or Bag-pipe-Pear of Autumn, *November*.
10. The Topinambour, or Potato-Pear, or Muské Finot, *December*.
11. The Arch-Duke, *March*.
12. The Naples Pear, same Month.
13. The Summer-perfume, same time.
14. The

14. The perfume of Berny, the Twenty Third of September.
15. The Spanish Boncretien, November.
16. The Crapaudine, or Toady-Pear, otherwife, the Grise bonne, or Gray-good, and Summer-Ambrette, August.
17. The Porringal Summer-Pear, or Prince-Pear, or Admiral-Pear, July.
18. The Villain-Pear of Anjou.
19. The Black Sugry-Pear, or Sucrin-Noir, December, and January.
20. The Cat-Pear, October.
21. The Jellamine-Pear, November.
22. The Bel de Caillou, or Russet of Anjou, November.
23. The Musk'd Onion-Pear, the same Month.
24. The Limon-Pear, November, and December.
25. The Estranguillon Vibray, or Vibray-Choak-Pear, December.
26. The Round Milan-Pear, January, and February.
27. The Queen of Winter, the same time.
28. The Carmelite-Pear, March.
29. The Winter-Russet.
3. The Jassini, and Frangipane, August.

## Bad Pears.

1. THE Dumas, or Chrifalline, or Marin-gout-Pear, of the shape of the Gilgiles, February, and March.
2. The English-Burket-Russet, September, and October.
3. The Sain-Pear, or Sound-Mans-Pear, August, and September.
4. The Summer-Certeau, end of September.
5. The Belle-Bonne, or Fair-good-Pear, October the Tenth.
6. The Catillac-Pear, October and November.
7. The Cadet-Pear, October, November, and December.
8. The Thick-tail'd-Pear, October.
9. The Fin-Oin-Pear.
10. The Paffe-Bonne, or Past-good-Pear.
11. The Chambrette, these three last, all in October.
12. The Winter-Caillet, or Pebble-Pear, to bake, November.
13. The Carmelite, Mazuer, or Gilgiles, November.
14. The Baking Pound-Pear, November.
15. The Ros-Pear, November, and December.
16. The Sicilian Musk'd Bergamot, or Dove-Pear, December.
17. The Citroul-Pear, same Month.

31. The Thorn les Ambrette, November.
32. The Gold-Pear of Autumn, the same Month.
33. The Nameless-Pear of Monsieur Le Jeune.
34. The Caillot-Rosat, or Rosie Pebble-Pear, or Rose-water-Pear, or otherwife, Pera del Campo, August, and September.
35. The Rose-Pear, August.
36. The Milan de la Beuvriere, or Summer-Bergamot, August the Twelfth.
37. The Winter-Orange-Pear, March, and April.
38. The Tuliped, Fly-Pear, September.
39. The Brutte-Bonne, or Chaw-good-Pear, or otherwife, the Pope-Pear.
40. The Finor of Orleans, common in August, Reddish, and like a Russet; it must be gathered green, to make it Mellow and more juicy.
41. The White-Butter-Pear, August the Twentieth.
42. The Double-Flower, March.
43. The Morfontaine, the Twenty Fifth of September.
44. The Tibivilliers, or Bruta-Marma, March, and April.

37. The

37. The Constantinople, or Borgueil-Pear, December.
38. The Orange-Pear of St. Lo, the same Month.
39. The Winter-Jargonelle, January.
40. The Gastellier, January.
41. The Estoupe, or Stopple-Pear, March.
42. The Bete-bir, the same time.
43. The Monrave, the same time.
44. The Gambay, April.
45. The Summer-Jargonelle, August the Twenty Second.
46. The Lombard-Pear, August.
47. The Sanguinole, or Bloody-Pear, August.
48. The Hasty-Pear, same time.
49. The Double-headed-Pear, August, and September.
50. The Onion-Pear of Vervan, August.
51. The Musk'd Certeau.
52. The Winter-Villain, January.
53. The Stergonette, the same time.
54. The Green-Pear of Pevens, January, February, and March.

55. The Toad-Pear, January.
  56. The Scarlet-Pear, August.
  57. The My-God-Pear, August.
  58. The Belle-Vege, same time.
  59. The Courtreau, or St. Giles's Pear, August.
  60. The Red Pairmain-Pear.
  61. The St. Francis-Pear.
  62. The Bequene.
  63. The Love-Pear.
  64. The Marine, or Thomas-Pear.
  65. The Carlie.
  66. The Chair-à-Dame, or Lady-flesh-Pear, August.
- There are some Pears among these, good to Bake, &c. which are,
- The Carmelite.  
The Caloit.  
The Great Fremont.  
The St. Francis.  
The Bequene.  
The Love-Pear.  
The Thomas, or Marine-Pear.  
And the Ros-Pear.

Besides the Bad-Pears which I know not, here is a particular List of those which I know to be so Bad, that I Counsel no Body to Plant any of them.

## Summer-Pears.

1. THE Summer-Certeau.
2. The Belle-bonne.
3. The Poire de Sain, or Sound-Man's-Pear.
4. The Sanguinole, or Bloody-Pear.
5. The Betterave, or Beet-root-Pear.
6. The Red Orange-Pear.
7. The Bellifime.
8. The Jargonelle.
9. The Lombardie.
10. The Windsor-Pear, August.
11. The Musk'd Vally-Pear.
12. The Odorant, or sweet-smelling-Pear.
13. The Scarlet-Pear.
14. The My-God-Pear.
15. The St. Giles, or Courtreau-Pear.
16. The Chair-à-Dame, or Lady-flesh-Pear.
17. The Vally-Pear.
18. The Toady-Pear.
19. The Milan-Pear, or Summer-Bergamotte de Beuvriere.

## Autumn-Pears.

1. THE Cadet-Pear.
2. The Musk'd Certeau.
3. The Chambret.
4. The Fin-oin.
5. The Paffe-bonne, or Past-good-Pear.

## Winter-Pears.

1. THE Catillac.
2. The Lady Joan.
3. The Pernan.
4. The Mountain-Foundling.
5. The Bernardiere.
6. The Burgundy Dry-Martin.
7. The Fountainable-Pear.
8. The Gastellier.
9. The Stergonelle.
10. The Vertzburg.
11. The Toad-Pear.
12. The Pairmain-Pear.

R 2

13. The

13. The Carific.
14. The Winter-Jargonelle.
15. The Malta-Pear.
16. The Swiss-Pear.

17. The Gilogiles.
18. The Maurityan, or Moorish-Pear.
19. The Armenian-Pear, the Fourth of January.

*A List of those which I Esteem not highly enough to Counsel any Gentleman to Plant them, nor yet so much Despise as to Banish them out of the Gardens of them that like them.*

*The Summer-Pears are,*

1. **T**HE Summer-Perfume.
2. The Berry-Perfume.
3. The Hally-Pear.
4. The Janet-Pear.
5. The Frangipane.
6. The Jasmine, or Gessmine-Pear.
7. The Brutte-bonne, or Chaw-good-Pear.
8. The Finor.
9. The Vervan Onion-Pear.
10. The Nicole-Pear.
11. The Béli de Mapan, *August*.

*The Autumn-Pears are,*

12. The Monsieur, or Brown Gold-Pear.
13. The Onion-Pear of Autumn.
14. The Thornless-Ambrette.
15. The Gold-Pear of Autumn.
16. The Tuliped, or Fly-Pear.
17. The Cyprus-Pear.
18. The Ruddy English-Bergamot.

19. The Nameless-Pear of Monsieur le Jeune.

*The Winter-Pears are;*

20. The Topinambour.
21. The Béli des Esfars.
22. The Arch-Duke.
23. The Naples-Pear.
24. The Armenian-Pear.
25. The Sicilian, or Musk'd Bergamot.
26. The Sucrin-noir, or Black Sugry-Pear.
27. The Round Milan-Pear.
28. The Winter-Villain.
29. The Winter-Gold-Pear.
30. The Legat, or Bouge-Pear.
31. The Bruta-Marma.
32. The Green-Perens-Pear.
33. The Ros-Pear.
34. The Citrol.
35. The Miret, *February*.
36. The Gourmandine, or Liquorish, or Greedy-guts-Pear, *March*.
37. The Macarius-Pear, &c.

## CHAP. IV.

### *Treating of Apples.*

Since Apples make a part of our Kernel-Fruits, and a very considerable part too, as well in respect of their Goodness, and Lasting Quality, as of the Convenience they afford us, of having them either growing upon little Dwarf Trees, grafted upon Paradise-Apple-Stocks, or upon larger Dwarf-Trees and Standards grafted upon Wild or Crab-Stocks, I will take the opportunity in this place to set down what I would Counsel Gentlemen to plant of them, before I proceed to speak of Wall Trees, among which, I seldom or never admit them Entrance.

Among the Apples that are good to Eat Raw, or Baked, or otherwise prepared, (for I meddle not here with Cyder-Apples,) I count Seven principal sorts, that is to say, the Gray-Pippin, the White, or Frank-Pippin, the Autumn Calvill, the Fenneller, or Fennell-Apple, the Cour-pendu, or short-hung, or short-stalk'd Apple, the Api, and the Violet-Apple. There are some others which I prize not so much, tho' they are no bad Fruit, as the Rambour, the Summer-Calvill, the Cousinotte, the Ogeran, the Jerusalem, the Thick Pairmain, the Ice-Apple, the Francatin, the Haute-Bontée, or High-goodness, the Royalty, the Rouvezain, the Chebue-Apple, the Pigeomet, or Pigeon-Apple, the Pass-ponne, or Passing-Apple, the Petit-bou, or Small-good, the Fig-Apple, &c.

All Apples pretty near resemble one another in their flat figure, and short stalk, and the most part of them in bigness too, and in their short Eating Pulp, but they are very different in Colour.

I know not above two or three sorts that are bigger than the others, namely, the Rambour, the Calvills, and the Ice-Apples, and but three or four that are more long than

than flat, namely, the Calvills, the Violets, the Jerusalem, and the Ice-Apples, and they are thicker towards the stalk than towards the head, so that we must conceive the most part of them flat, without any further Description.

The Two sorts of Pippins are distinguished by the Two Names of Gray and White which they bear, being in other respects of an equal goodness; good Compotes, or Wet Sweet-Meats may be made of them at all times, and they begin to be eaten Raw towards the Month of January; before that time, they have a little point of sharpness which pleases not some people, but unhappily as soon as ever they begin to be entirely free of that, they contract a smell that is much more displeasing, and which is rendered still more disagreeable, when the smell of the Straw upon which they are laid to Mellow, intermixes therewith. In fine, it may be said, to the advantage of these Pippins, that they are very profitably made use of almost all the Year long; and to their disadvantage, it may be no less truly affirmed, that their Neighbourhood is infinitely disagreeable and incommodious.

The Summer and Autumn-Calvills resemble one another pretty near in their longish shape, and in their Colour, which is of a Blood-Red, but yet the Summer-Calvill is a little flatter, being likewise less Coloured without, and not at all within, whereas those of Autumn are very Red both without and within, and especially the best of them; that is to say, those that have the most agreeable Violet-smell that renders them so considerable. I say, these most excellent ones have always their pulp deeper tinged with Red, and are also more beautiful to look upon than the others. They keep molt commonly from October, when they begin to come in, till January and February. It is a most excellent Fruit to Eat Raw, and no less excellent to use in Compotes, and Wet Sweet-Meats. It sometimes grows dry and mealy, but that is not till 'tis very old. The Summer-Calvills, both the White and the other, are gone as soon as September is past; they may at least be said not to be disagreeable, and especially in the Pyramids of their Season.

The Fenneller, or Fennell-Apple, or Anis-Apple, is of a Colour not well to be express'd. It is Grey, overcast all over with something of a Russet, coming near the Colour of the Belly of a Doe, never taking any Lively Colour. It never grows very big, and seems to incline to a Longish Figure: Its pulp is very fine, and its juice much sugred, and perfumed with a little smack of those Plants from which it derives its Name. This Apple begins to be good from the beginning of December, when we have the pleasure to Eat it with the Pears of the Season, and keeps till February and March. It is certainly a very pretty Apple, and would be much more so, if it were not so apt to wrinkle and wither as well as that which follows next.

The Cour-pendu, or short-hung, or short-stalk'd Apple, whose Ancient Name some would have changed, to give it that of Bardin, is perfectly of the regular figure of an Apple, and is of a reasonable bigness; it is of a Grey-Russet Colour on one side, and Dyed with Vermilion on the other. Its pulp is very fine, and its juice very sweet and pleasant; they are Eaten with pleasure from the Month of December, till February and March: We must not give it time to grow wrinkled, because then it is insipid, and loses its taste. It is likewise a very pretty Apple.

The Api, which is in truth, a Right Lady's-Apple, and good Company, is known by all the World, as being remarkable for its extraordinary piercing and lively Colour. It begins to be good as soon as it has no more green left, neither towards its stalk, nor towards its Crown, which happens pretty often in the Month of December, and then, if I may be permitted so to speak, it requires to be Eaten greedily, and at a chop; that is to say, without Ceremony, and with its Coat all on: For among all the other Apples that are, there are none that have so fine and delicate a Skin as this; it is scarce perceivable in the Eating; nay, and contributes so much to the agreeableness found in these Apples, that 'twould be to impair that to strip them of it. This Apple lasts from December till March and April, and plays its part wonderfully well in all Winter Assemblies, whither it brings no disagreeable smell, but on the contrary, a certain little touch of a most delicious perfume in a pulp extraordinary fine; and to conclude, it commands Esteem where-ever it presents its self. It is of great increase, and consequently may be commended for a very pretty Apple, and has this further particular advantage, that it never wrinkles nor loses its Charming Colour.

The Violet-Apple is of a Whitish Colour'd ground, a little speckled in those parts turned from the Sun, but marked, or rather striped and whipt with a good lovely deep Red on that side exposed to the view of that Luminary: The Colour of its pulp is very White, and its self very fine and delicate, having a juice extremely sweet and sugred, leaving no Earthiness or Lees behind it, so that assuredly it is an admirable Apple

its Character and Season.

Other pretended Winter-Apples.

The Black Ice-Apple described.

The Rambour de foied.

The Confinettes described.

The Organs of little worth. The Star-Apple described.

The Jerusalem-Apples described.

The English-Pearman described.

Golden-Pippins described.

The Appis described.

The Francatis described.

The Haute-bon's, High-goodness, or Blandilites, described.

The Rovezeau's described. The Chefnut-Appis described.

The Pignons, or Flowerly-Appis, otherwise the Fig-Appis, described.

The Petit-bon, or Little-good, described. The Rose-Apple described.

Paradise-Apples, how commodious to graft the best Apple-Trees upon.

They may be sly placed between the Dwarf-pear-trees planted about the Square in Rosh-gardens.

to begin to Eat of as soon as 'tis gathered, and continues till *Christmas*, beyond which time it will not reach.

I was promised a *Violet-ice-Apple* pretended to be better, and to last longer, and not to come in season till after the other, but I have seen none of them yet. I have indeed seen one they called the *Black Ice-Apple*, of the bigness and shape of an ordinary *Pippin*, and of a very shining Dark Red Colour, except on that side not exposed to the Sun, which has little or no Red in it; which is an *Apple* that keeps till *April*, but it has all ways such a tang of a Green talt, which is so disagreeable, that it has given me little stomach to multiply many *Trees* of it.

The *Rambour*, as I have already said, is a fair large *Apple*, Green on one side, and whipt with Red on the other; it is Eatable as soon as *August* comes in, but lasts but a little while: It is very good Baked, or otherwise prepared, and requires particularly to grow on *Standard Trees*, the little *Paradise-Apple Stocky* being too weak to support the weight of it.

The *Confinettes* are a kind of *Calvills*, which keep till *February*; their Juice is very sower, and their Stalk long and small.

The *Organs*, both the *hasty* and *backward* ones, seem to me of little worth.

The *Apple* which is formed like a *Star*, and bears that Name, is Yellow, and keeps till *April*, and is fowrth and hardish, and worth no great matter.

The *Jerusalem-Apples* are almost Red all over, have a firm pulp, but of little talt, though it be a little sugred, and have nothing of that ill finell that accompanies most *Apples*.

The *Thick English-Pearmans* are of the Colour of the *Jerusalem-Apples*, but are flatter, and sweeter, and more sugred: The *English* make greater account of them than of most of our *French-Apples*: They likewise mightily esteem another sort of *Apples*, which they call *Golden Pippins*, which have perfectly the Air of *Paradise-Apples*, or some other Wild *Apples*: They are very Yellow and Round, and have but little Juice which is pretty high, and rich tasted, and without any ill finell.

The *Ice-Apples* are so called, because when they Ripen, they seem to grow transparent, without being really so. They are altogether Greenish and Whitish, and make no great figure among any truly Curious persons.

The *Francatis* are Red on one side, and Yellow on the other. They keep a great while, and that's their principal Excellency.

The *Haute-bon's*, or *High-goodnesses*, are White, Horned, and Longish, and last a long time. They are called in *Poison*, *Blandilites*: Their pulp is pretty sweet, with a little touch of sharpness.

The *Rovezeau's* are Whitish, Coloured with Red.

The *Chefnut-Apples*, called in *Anjou*, *Martranges*, are White and Russet, Coloured with a kind of Dirty and Dusky Red.

The *Apple* without flowering, or *Flowerless*, or *Blossomless-Apple*, is Green, and grows out of the Tree just as *Figs* do out of a *Fig-Tree*: It keeps a long time, and is sometimes called a *Fig-Apple*.

The *Petit-bon*, or *Little-good*, is longish, and pretty good.

The *Rose-Apple* extremely resembles the *Apis* in all its outside, but to my taste is not so good, whatsoever the curious Gentry about the *Rheme* can alledge to the contrary, who would extoll this above other *Apples*, as much as they would the *Cat-pear* above other *Pears*.

And these are all the *Apples* as near as I can reckon, that I know, after a very exact Scrutiny, and because there is no great difference among them in goodness, I willingly content my self with the seven first sorts, for which I have exprest some esteem, and shall make no scruple to plant a considerable quantity of them, provided they be grafted upon *Paradise Apple-stocks*, that being a *Tree* that shoots forth little Wood, and consequently produces but small *Dwarf-Trees*, that give very little incumbrance, and that besides, is blest with the advantage of producing great increase, which makes it very considerable to our curious Gentlemen; to which may be added, That it equally agrees with all sorts of Soils, both hot and cold, dry and moist.

I use often to place some of them between all the *Dwarf-Pear-trees* I plant about every Square of our *Kitchen-Gardens*, and for that purpose, I set the *Pear-trees* at a pretty good distance one from another, without being at all afraid my *Apple-trees* should defraud the *Pear-trees* of their nourishment, because these latter draw their a good depth out of the Ground; whereas those little *Apple-tree* which need but little, content themselves with licking up those Superfluities of it only, which were spending themselves towards the

the Surface, and outward Crust of the Earth. By the means of these little *Apple-trees*, I have the convenience to allow my self almost as many *Trees* of one sort of *Apples*, as of the other, and since these little *Trees* are agreeable enough to the sight in great *Gardens*, it follows naturally enough from thence, that they produce no ill effect in little ones.

Now therefore we have nothing else to do but to determine what kinds of them to plant, and what number of each kind, and this is my Method with them; if I have room enough to plant a considerable number of them, as for Example, from fifty, to one or two hundred; I plant two thirds of the total number, of these four sorts, *Gray-pippins*, *White-pippins*, *Autumn-Calvills*, and *Apis-apples*, of each an equal number; and for the remaining third part, I divide it into three portions, which I employ in *Trees* of these three other kinds, viz. *Fennellets*, *Cow-pend's*, and *Violet-apples*.

And proceeding in this manner, in fifty *Apple-Trees*, I shall have eight *Gray Pippin-trees*, eight of *White Pippins*, eight *Autumn-Calvills*, eight *Apis*, six *Fennellets*, six *Cow-pend's*, and six *Violet-apples*. In a hundred *Apple-trees*, I shall have sixteen of each of the four first principal sorts, and twelve of each of the other three, and so proportionably in the number of two hundred. But when we shall have occasion to plant three, four, or five hundred, I shall mix with them a twelfth part composed of *Summer-Calvills* and *Rambours*; and so at that rate, there would be in three hundred *Apples*, twelve *Summer-Calvills*, and twelve *Rambours*, with forty three *Gray-pippins*, forty three *White pippins*, forty three *Autumn-Calvills*, forty three *Apis*, thirty two *Fennellets*, thirty two *Cow-pend's*, and thirty two *Violet-apples*, and so forwards in greater numbers of each sort, according to the same Proportion.

And if any curious Person be minded to add besides, some other *Apples*, as for Example, some *Jerusalem Petit-bons*, or *Little-goods*, *Chefnut-apples*, &c. he may do his pleasure, but in my Opinion, that is, according to my taste, these others are not so good as those seven kinds which I here prefer before the rest.

There remains but one difficulty more to clear, which is to direct what is to be done in very little *Gardens*, in which I freely counsel that some little *Apple-trees* be planted: there needs but a very little room to place half a dozen, or a whole dozen of them, without so much as the Company of any *Pear-trees* among them, and without harming any of the little *Plants* we have a mind should grow under them. In such a Case, I would plant but six or twelve *Apis*, which when laden with Fruit, would be a very pretty ornament to such a little *Garden*, and if there were room to place two dozen, there should be eight *Apis*, eight *Autumn-Calvills*, and eight *Cow-pend's*; if there were occasion for forty, they should be parted among those three above-said kinds, together with the *Fennellets*, and *Violet-Apples*, and so there should be still eight of each sort; that is to say, I would hardly plant any *Pippins* at all among them, they being so easy to be had every where for Money, and Peoples curiosity leading them to covet the other sorts rather than them.

The great *Dwarf-Apple-trees* grafted on *Crab-Rocks*, are hard to be brought to bear, produce too unsightly and cumbersome tops, and too ungovernable to be reduced to a middle-sized Figure, and require a great extent of Ground, so that 'tis much better to have great *Standard Apple-trees* in separate Orchards, where they spread into tops sometimes of three or four Toises or Fathoms Diameter. In this Case, they require to be placed at a great distance one from the other, that is to say, about sixteen or twenty yards, and yet they will not continue long to bear Fruit, nor consequently to pleasure us. It is most especially needful to have recourse to those *Standard Trees*, for *Autumn-Calvills*, *Pippins* of all sorts, *Rambours*, *Francatis*, &c. and then Gentlemen may plant as many *Trees* of them, as they have occasion for.

After having treated of both *Pear-trees* and *Apple-trees*, as well in the figure of *Dwarf-trees*, as of *Standards*, it is very pertinent to discourse next of those sorts of *Stone-fruit* that are capable of prospering either in the one or the other of those two Figures, before we come to the *Wall-trees*.

## CHAP. V.

### How to make the best use of the Walls in every Garden.

Among the *Fruit* and *Kitchen-gardens* of which I treat, there are some that are entirely enclosed on all sides with Walls, and some that are so but in part, and some again that are without any at all; as for these last, I have nothing to do nor say to them, but to pity them, and wish them better fortune; the condition of the *Gardens*

what proportion of *Trees* of each choice sort of *Apples*, is it best to plant, from the total Number of Wits, to several Hundreds.

what sort of *Apple-trees*, and in what proportion, is it best to plant in little *Gardens*.

The Inconvenience of great *Dwarf-Apple-trees*, on *Crab-Rocks*, &c. Great *Standards* in separate Orchards, best for *Apples*, and how to be managed.

Of the quantity of Walls.

Of the several Figures of Gardens, and their convenience, or inconvenience.

The number of Expositions that cannot exceed four.

What is meant by Expositions.

The four Expositions, Easterly, Westerly, Southerly and Northerly, defined and explained.

The Sun always shines upon two Walls at once, and how.

we have to do with, for many good Reasons, requiring to be walled quite about.

As for the first sort, they have at least three *Expositions*, it being not possible they should have fewer, and regularly, they have four, those which have but three, are *Gardens* that are Triangular, and they are pretty rare, that being a cramped and forced figure, which people strive to avoid as much as they can. As for those that have four Walls, they are of a Square Figure, which is the commonest as well as the fairest and most convenient. There are some indeed, as I have said elsewhere, that are *Pentagonal* and *Hexagonal*, &c. which are not very disagreeable for the planting of *Wall-trees*. But I make no great account of them, because they are attended with many inconveniences, and perplex Gardeners, who are thereby hindered from forming any fair and rightly Squares in their *Kitchen Gardens*, which consequently makes me have little Stomach to speak any thing in their favour; and besides, it costs a great deal more to make *Gardens* of those unusual Figures, than to make them simply and plainly square; and yet when all's done, though such Figures may have more Walls, yet they can have no more distinct *Expositions* than a plain square, for let us do the best we can, it is impossible by any variation of Figure that can be invented, to produce any more than four of them, that is to say, the *Expositions* of the East and West, and of the South and North. This is a truth that needs no proof, since no Body can call it into Doubt.

Now in Terms of Gardening, we call *Expositions*, every Wall that enjoys the Aspect and kindly reflection of the Rays of the Sun during a certain time of the Day, in a different manner from another Wall not in the same position. Thus we call an *Easterly Exposition*, a Wall that is eyed by the Sun the first half of the Day; that is to say, from its Rising till Noon, at what hour soever it begins to rise; and that a *Westerly Exposition*, which is shone upon the second half of the Day; that is to say, which begins to be shone upon immediately after Noon, and continues to be so till Sun-setting. And we style that a *Southerly Exposition*, which beginning in Summer time, to enjoy the comfortable smiles of the Sun, soon after his rising is not totally deprived of them till he be almost ready to disappear from among us, or perhaps not till he be actually out of sight, or to speak more generally, we call that a *Southerly Exposition*, that is it self alone constantly shone upon longer than either of the two former taken separately, and there are some Gardens so advantageously turned, that one of their Walls is almost the whole day cherished by the Sun-Beams.

I express in the Treatise of Plantations, what sorts of Expositions I affect most, and counsel others to affect too, that have as we say, a whole piece of Cloath to cut out as they list, in order to the contriving themselves both a fair and good Garden, which is a Happiness, not very ordinarily to be met with, especially in great Cities, where Gentlemen are under a thousand Subjections to their Houses, for which their Gardens are made, and to which they must be accommodated, and consequently are such Subjections from which they can hardly ever exempt themselves.

After all we have said about the three good *Expositions*, it is no hard matter to conclude, that the unhappy *Northerly Exposition* is that which enjoys the Sun, only during that little time in which the *Southerly* one has him not; for the Sun cannot shine upon two Walls directly opposite one to the other, at the same time. The Portion of those of the North, then, is to enjoy from the *Equinox of March*, to that of *September*, the earliest Rays of the Sun that appear above our *Horizon*; that is to say, to be shone upon betimes in the Morning, and that sometimes for an hour or two, and sometimes for three or four, but sometimes they run the danger of having but a very short view of him towards Evening; nay and very often, of having none at all.

It follows from this Explication of *Expositions*, that there is no Wall that has not at least some little glance of the Sun once a day, and that is a favour always to be counted for something.

And this, if I mistake not, is the proper place in which I ought to tell you, that the Sun never begins to shine upon one Wall, but he shines upon two at the same time, and they are those that concur to make the common Angle in which the two join that are so shone upon; thus when he rises, he ordinarily shines at once upon the *Northern Wall*, and part of the *Eastern* one, and as soon as ever the progress of his Course, carries him out of the sight of that of the North, He intently extends his Beams to that of the South, yet so as not for a good while after to quit that of the East, but shining upon both at once; in the same manner also he leaves not off shining on the *Eastern Wall*, but in order to advance himself by little and little to the *Westerly Exposition*, and to continue in the mean while his favourable Aspect to the *Southerly Wall*, so that those two Walls are likewise at the same time gratified with his cheering Rays.

And

And thus every day begins and ends that glorious progress and course of the Sun, which causes the fertility of the Earth, the goodness of *Fruits*, and the Joy and Pleasure of Mankind: But he finishes it not however, without scattering some small Remains of his last Melancholy and Expiring Splendour upon the poor *Northern Wall*, he gives it a slight visit in passing, that is to say properly, he only glances lightly by it when he is got beyond the reach of its *Southern* Opposite. Any two Walls that are diametrically opposite one to the other, are never shone upon at the same time, unless it be just in the moment the Sun is passing from one to the other; for then that great Torch which is always advancing with an unconceivable Rapidity, appears as if he were for some time stopt, and fixt, though he really be not, and then he may be truly said to view three different *Expositions* at the same time; but that being only just as he is going to quit the sight of that of the three, which he had thitherto continued the longest looks towards, and beginning to turn his Countenance towards the other, which is directly opposite to it, cannot be of any long duration. Upon which, I suppose, they are neither any tall *Trees* nor high Walls, nor neighbouring Houses that may obstruct the reflexion of the Sun's light upon any of the *Expositions* we are examining, otherwise we shall never be able to lay down any thing positive for the instructions we intend to subjoin about them.

After having thus explained what we mean in terms of Gardening, by *Expositions*, any Person may easily judge of those he has in his own Garden, whether it be walled quite about, or only in part; as we see in those for Example, that are closed on some sides only with Rivers, Ditches, or quick Hedges, &c.

But though I were informed of the extent of the surface of every Garden, that would not enable me to calculate any thing near what extent of walling it will take up. For Example, though an *Arpent* or *Acre* of *Paris* Measure, contains nine hundred Toises or Fathoms of *Superficies*, yet it may be, that this *Superficies* may be reduced to a perfect Square of thirty Toises or Fathoms every way, and so such an *Arpent* or *Acre* will contain but one hundred and twenty Fathoms in Compass, that is to say, sixty Yards for each of the four *Expositions*, which is as little Walling as a *Paris Acre* of Ground can have.

Some such *Acre*s may also have one hundred and thirty, one hundred and fifty, two hundred, two hundred and eighteen, and sometimes as many as three hundred and twelve Fathoms Circumference, and more; which will happen, if in the first occasion there be supposed two large sides of forty five Fathoms each, and two lesser ones each of twenty; if in the second there be two long sides of sixty, and two shorter ones of fifteen Fathoms each; if in the third there be two long sides of fourscore and ten, and two shorter ones of ten Fathoms each; if in the Fourth, supposed to be a Triangular enclosure, there be two sides of one hundred Fathoms each, and a short one of eighteen. And lastly, if in the fifth, this *Acre* have two long sides of a hundred and fifty Fathoms each, and two short ones of Six Fathoms each, &c. which indeed would make a very odd conceited Garden, and one ridiculous enough. But however such a Case may possibly happen.

After all, I can truly say, that I cannot exactly calculate what quantity of Walling every piece of Ground will require for its entire enclosure, since as I have just now shewed you, one and the same quantity of Superficies may have a great deal more, or a great deal less, according to the greater or lesser length of the sides of the said Land.

In fine, it is pleasant enough to see, that if a Square have two hundred Fathoms of Walling in its Circumference, and we be minded to make a separate inclosure of the quarter, or of the half of the said square, that quarter will take up one hundred Fathoms, which is the half of the whole, and that half will take up one hundred and fifty, that is, three quarters of the whole; *Geometry* satisfies us with good Reasons for all those differences, which belonging not to my subject, I omit.

Therefore I shall not define what Circumference a Garden may have, nor what *Expositions*, because I cannot, but shall only tell you how many *Trees* each *Exposition* may admit, in respect to two things, viz. the height of the Walls, and the goodness of the Ground, for the better the Ground is, the more *Trees* it is able to nourish, the contrary may be said of that which is lean and barren; likewise the higher the Walls are the greater number of *Trees* may be applied to them; that is to say, we may place them so much the nearer one another, and by this means order them so, that between two, which we may reserve to garnish the lower part of the Wall, there may be always one to shoot up and garnish the upper part, that so the upper and lower parts of our *Fruit-Walls* may be both garnished at once, and consequently yield us *Fruit* so much the sooner, and in the greater quantity. The contrary is likewise true in respect of Walls that

When the Sun seems to stand, and shines a small moment upon the three Walls at once.

What is the extent and content of an *Arpent*, or *Paris Acre*.

What quantity of compass such an *Acre* or *Arpent* may have, and what Walling it may require in several sorts of Figures, as a perfect Square, &c.

A pretty Geometrical remark made out of greater ones.

The number and distance of *Trees* to be ordered according to the different height of the Walls, or quality of the Ground.

are low, always considering withal, the quality of the Soil; that is to say, the lower the Walls, so much the further the *Trees* are to be placed one from another, and those very distances must still be more enlarged when the ground is very rich, than when it is but indifferently qualified.

A Difficulty explained in ordering of wall-trees. In what case, even in good Soils, they are to be placed nearer one another, than otherwise.

And here it is needful to explain and make you understand the following Truth which seems a little Paradoxical: Our design in Planting *Wall-Trees* is indeed to have so much the fairer Fruit, but still more chiefly, to secure the greater store of it; but *Trees* do not infallibly yield Fruit, unless it be upon feeble Branches, and therefore we shall have no Fruit upon our *Wall-Trees*, unless we contrive it so, that we may have some feeble Branches on them: And if the *Trees* be very vigorous, as they are commonly in good Soils, they cannot produce any feeble Branches, unless they be allowed a great deal of room to spread out to the best advantage all those that are fit to bear; because, that supposing they be Planted too near one another, and the *Walls* be not high enough, they must necessarily be Pruned very short, or else they will shoot above the *Wall*, and consequently cease to be *Wall-Trees*; or else they will so entangle their Branches one with another, that they will make a very disagreeable confusion, and such a one as will prove as prejudicial to the Fruit, as if they had been cut too short.

If then they be Curbed in that manner; that is to say, if we leave them not Branches of some reasonable thickness and length, all the young shoots they will produce will be always thick, and thick ones bear no Fruit, and consequently good *Trees* Planted near one another in a good ground will bear no Fruit, and all through the Gard'ner's fault: And therefore it follows by an undoubted consequence, that in good Soils, whose *Walls* are but low, we ought to allow very considerable distances between *Tree* and *Tree*, if we would pretend any store of fair Fruit from them; and that when the *Walls* are higher, we may and ought to place the *Trees* nearer one another, as I have already shewed; now I shall proceed to tell you what is my Advice concerning the Measure and Regulation of those Distances.

Of what height Walls ought to be, and the several allowable proportions of that height, viz. never to be less than 7 or 8, and never more than 15 or 16 Foot.

My Judgment is, that no *Walls* of inclosure ought to be made less than Seven or Eight Foot high, as well for the better security against Robbing and Spoiling to be apprehended from abroad, as for the advancing and improving the goodness of the *Wall-Trees*: I likewise am of Opinion, that in the good *Expositions*, it is not convenient to desire *Walls* of above Fifteen or Sixteen Foot; for as for those of the *North*, which we call bad ones, the highest *Walls* are ordinarily the worst, for they cast long shadows of pernicious influence to Gardens, but yet we shall endeavour to make a good use of them, and especially in Soils a little dry, and in pretty hot Climates.

Leaning Walls not proper.

By all I have newly said about the height of *Walls*, it appears, that I have little value for those *Leaning-Walls* to pretend to make them *Fruit-Walls* for *Pears*, *Peaches*, *Apricocks*, &c. but they may serve for something else, as I shall shew afterwards: It likewise appears, I do not much approve the extraordinary heights of some topping *Walls* of Houses, or of Churches, though I make use of them very advantageously when I meet with any of them exposed to the *East* or *South*; and that is, particularly to raise *Figs* against them, which as they love nothing so much as heat and shelter, so they apprehend nothing so much as the Cold Winds and *Scabbiness*; and *High Walls* are very proper, as well to do them all the good they need, as to defend them from the *Milchies* which attack them.

When I here so much extoll the Conveniences of the *High Walls* of the *East* and *South* Quarters, I suppose it to be in Climates where the Heat is but small, or at least very moderate; for in those which are hot and burning, as those of our *Provinces*, and of *Spain*, and *Italy*; or that exceed them still in heat, as those Countries that lie nearer the *Line*, in those Climates, such *Walls* are as formidable and pernicious to Fruits which do but broil and cleave or chap against them, and to *Trees* which they dry up, and kill, as the *Northern Walls* are uneasy, and contrary to the ripening of Fruits in other places that offend in want of Heat, and excess of Moisture.

## CHAP. VI.

### Of the Distances to be observed between Wall-Trees.

Before I proceed to Regulate the Measures of the Distances to be observed in the placing of all sorts of *Trees* that are to be Planted against *Walls*, because there are some kinds of Fruits that require very different Distances from others, I think, that for the

the better understanding of what I am to deliver upon that subject, it will be necessary I should first examine what Fruits really deserve admittance to this choice situation; and secondly, which, as unworthy, are to be excluded.

Of the first sort are all the good kinds of *Figs*, *Peaches*, *Plums*, *Pears*, and *Grapes*, with the *Hasting*, or *Forward-Cherries*; all sorts of *Apricocks* are also of that number; with some *Azrells*, or *Garden-Haws*. I speak expressly of the good kinds of every sort of Fruit, to shew, that I admit not indifferently to the Privilege of the *Wall*, all sorts of *Figs*, *Peaches*, *Plums*, *Pears*, &c. And then secondly, those which ordinarily are excluded from it, are *Apples*, *Mulberries*, *Almonds*, ordinary *Cherries*, *Aviots*, *Bigarons*, *Quinces*, &c. unless it be when we have so great a quantity of *Walling*, that we know not, as I may say, how to dispose of it, and therefore resolve out of Curiosity, to fill up the superfluous places of it with some *Trees* of those sorts of Fruits.

Of all the Fruits that have rank and place among *Wall-Fruits*, those that require the least distance one from another, are all sorts of *Grapes*, they contenting themselves everywhere with Two Feet, or Two Feet and a half distance at most, and therefore there will be no difficulty in regulating their distances, as there will be in ordering that of other Fruits. Those which must be allowed good large distances, are *Peaches* and *Plums*; *Pears* need not quite so great, nor *Hasting*, or *Forward-Cherries*, but the *Apricock* and *Figs* commonly require greater than all the rest; the first, because they shoot forth very thick Branches which it is dangerous to cut too short; and the latter, because they are little subject to Pruning, and shoot up mightily in their stock, and therefore have need of a considerable extent of room, or else they will hardly bring any Fruit.

To treat of all these with the more Order and Brevity, I will divide them into Two Classes, One, for those *Trees* that commonly take up more room, which shall be the First Class; and another, for those that take up less, and that shall be the Second. The First Class comprehends *Figs*, *Peaches*, *Plums*, and *Apricocks*; the Second comprises *Pears*, *Hastings*, or *Forward-Cherries*, and *Azrells*, or *Garden-Haws*: Which Two Classes must be well observed, for the full understanding of my Distinctions.

Now, as we have already said, the principal things that must Regulate all our Distances, must be the greater or lesser height of the *Walls*, or greater or lesser goodness of the Soil. And accordingly, my Custom is to order them in this following manner, conformably to my above said supposition of Two Classes of *Trees*.

Against *Walls* that are about Seven or Eight Foot high, or a little more, if the Ground be good, and the Soil fresh and hearty, as it is in many places, I place the *Trees* of the First Class at Twelve Foot distance one from the other, and those of the Second, at Nine; but if the Soil be but indifferently qualified, I place the First at Eight or Nine; and the Second, at Seven or Eight Foot distance.

The distance of Twelve Foot surprises a Gentleman raw and unexperienced in these Curiosities, who has not many *Walls* to fill up; for example, a Gentleman that has but Threecore or Fourcore Yards of *Walling*, when he sees himself confined to Plant but Fifteen or Twenty *Trees* against it, he is apt to fear two things, the first is, that he shall hardly ever see his *Walls* well garnish'd; and the second, that he shall as hardly ever have much Fruit: But besides the inconveniences, which, as I have shew'd, arise from Planting *Trees* too near one another, as well in regard of the Barrenness it causes in them, as of the greater trouble it gives for their Cultivation; I say, besides this, first, we may confidently expect, that *Trees* Planted in a good Soil, will be brisk, and easily shoot forth every Year several young Branches of Four or Five Foot long apiece; and that so, according to that rate, being Planted in such a Soil, and against *Walls* but of a small height, and at Twelve Foot distance one from another, which by consequence makes round about them, about Six Foot for each *Tree* to Garnish as well upwards as on each side of them, such *Trees* I say will certainly in few Years come near one another, and therefore will not leave the spaces between them long void: And so this will be a speedy Remedy against the Gentleman's first fear.

To Remedy the second, He may venture to plant double the number of *Trees* I have before limited, if he like to be at that Charge, notwithstanding my above said advice which is against it, and so place them at the distances of Six Foot, to please his Eye with seeing his *Wall* so much the sooner garnish'd, but then it must be upon condition, that at the end of Three or Four Years, when those *Trees* shall be in a condition to begin to act their parts well in bearing Fruit, to recompense by that means the nourishment they have consumed, and the pains they have cost; I say, it must be upon this condition, that the Gentleman be of a temper at the expiration of that time, to be willing for securing the flourishing condition of the rest, to sacrifice the superfluous half, by plucking

*Grapes* require the least distance of any wall-Fruit.

*Figs* need most of any, and why.

*Trees* in relation to distances, divided into Two Classes, viz. 1. requiring large distances, and 2. requiring smaller, and what Fruits belong to each. The chief Rules for distances taken from the height of the walls, and quality of the Soil. Rules for the first size of walls of Seven or Eight Foot high. The distance.

Reasons for the distance of 12 Foot sometimes in Plantations: against such walls.

Objected Inconveniences and fears Answered and Remedied.

plucking them up by the Roots, and throwing them into the Fire, and afterwards putting fresh Molds about those left to grow, instead of the old Earth which the unfortunate condemned *Trees* have so usefully exhausted: For he must necessarily proceed to that extremity with them, or else he must lay aside all hopes of Fruit. And methinks people are but too apt to make use of the first expedient when they begin their Plantations; and in earnest, it is that which most of any thing tickles the Fancy of those that are apt to reckon upon their store of Fruit from the number of their *Trees*, but we find few that can find in their hearts to proceed to the Execution of the Second, when the time that requires it is come, and so by that imprudent and unreasonable pity, they infallibly fall into those Inconveniences which I have mentioned; so that the surest way is, not to be at any such unprofitable Expences, nor to give our selves such occasions to have those Combats afterwards within our selves; and therefore I Counsel Gentlemen rather to follow the Advice I propose in observing the distances I prescribe between *Trees* to be planted in special good Soils.

Rules for walls of  
between Nine  
and Eleven foot.

Let us now proceed to planting our *Trees* by *Walls* of Nine Foot high, or more, and let us tell you, That if the ground be good, as I have before supposed, then the distances of the *Trees* of the first *Class* shall be proportioned at Nine or Ten Foot, and those of the second, at Seven or Eight; but if the ground be not very good, Eight Foot will suffice for the first, and Seven for the second: Where Note by the by, that tho' the difference of a Foot more or less, as well in the height of the *Walls*, as the distance of the *Trees*, seems no great matter, yet is it of very considerable influence for the good or bad success of a *Wall* Plantation.

Rules for walls of  
Eleven or  
Twelve Foot.

If the *Wall* reach the height of Eleven or Twelve Foot, or a little more, and the ground be full as good as we desire, then I plant the *Trees* half as near again as by the *Walls* above mentioned, taking care all along, that between every Two *Trees* of indifferent Stature, which are managed so as to garnish the lower part of the *Wall*, there be one which may shoot up and garnish it above; for which purpose, we may have some *Trees* of the true Standard-kind, which prove very useful, especially for *Pear-Trees*, *Cherry-Trees*, *Apricot-Trees*, and even for *Peach* and *Plum-Trees* too, tho' for these two last, we may do well enough without them, because they are *Trees* that commonly in little time put forth shoots big enough to form very fine Stemmings or Bodies, and consequently fit to mount up and garnish the upper part of our *Walls*. In such a Case then, where the *Walls* are very high, I add as many *Trees* more; and for that reason, if the Soil be good, place them at about Six Foot distance one from another; and if it be but indifferently qualified, I reduce their distances to Four or Five Foot, making my account, that by this means, the head of each of those taller *Trees* will garnish about Five or Six Foot of the *Wall* on each side of them, which it will easily do, provided that at the end of Seven or Eight Years, if we perceive their vigour flag, care be taken to put a little fresh Mold between every Couple of *Trees*, to restore it, and to repair that heart in the ground which so many Roots may have exhausted, or brought low; but so long as we perceive no change in the *Trees* to the Worse, we need not trouble our selves to do any thing to the Earth.

I shall Advise you by the way, that one of the things that most displeases me in *Wall-Plantations*, is, to see *Vines*, *Figs*, *Stone Fruits*, and *Kernel Fruit*, interlaced pell-mell one among another against one *Wall*; I think it much more convenient to place every Kind in a separate quarter by themselves; so as for Example, one good *Wall* might be only for *Figs*, and another for *Peaches*, *Plums*, and *Apricocks*, the mixture of which, I do not much condemn, because that the *Peach-Trees* being more subject to perish and die, in whole, or in part, either by Accident, or by Age, than those other Fruits, there may always remain in our *Wall-Plantation* some other *Trees* to keep up its Beauty in case of any Mortality hapning to the *Peach-Trees*; another end of a *Wall* should be for *Pear-Trees*; which as near as 'twere possible, I would by no means mix with the *Peach-Trees*: In fine, another part of this *Plantation* should be for the *Early*, or *Hungary-Cherries*, and another for the *Grapes*, which last I would have also separated into several quarters, according to their different sorts, without confounding together the *Muscats*, or *Musk*, or *Muscataine-Grapes*, with the *Chasselas*, *Corinthians*, &c.

Sometimes indeed I chance to place some Plants of *Chasselas-Grapes* among other Fruits, but that never happens, but when 'tis to garnish some part of a *Wall* that is extremely high, with design to have some stock of it shoot fruit up to a certain height, to which other Fruit can seldom ever reach, which is not ordinary; nay, I care not to see my darling *Muscataine-Grapes* in that Service, because they ripen not so well when raised upon high *Trellis*, as *Chasselas* do.

And

And now without repeating over again all the above specified differences, either of the heights of *Walls*, or goodness of Soils, I shall suppose all sorts of *Walls* about the height of Nine Foot, which is the most ordinary height, and all grounds we are to deal with, to be of a reasonable goodness; and according to that Foot, I shall regulate all sorts of *Wall-Plantations*, leaving every one in this matter to govern himself by the Rules we have above-prescribed for the greater or lesser distances of his *Trees*, according to the greater or lesser height of his *Walls*, and as his grounds shall more or less excell in goodness.

The Author will suppose all walls about the height of 9 Foot, being the most ordinary height, and all grounds to be of a middling goodness, and lay down his general directions according to that Foot.

## CHAP. VII.

### How to know what kinds of Fruits deserve best to be admitted into Wall-Plantations.

THERE may here arise a Great and Pleasing Contestation amongst our Curious Gentlemen, how to decide which sorts of Fruits, in their Judgment, ought to be honoured with the first and best places in our *Wall-Plantations*, and perhaps at least, in this Country, the Charming Excellence of the Choicer sorts of *Grapes* may raise a powerful and formidable Party to declare for a Decision in their favour.

The pretensions of *Grapes* to the first place in a *Wall-Plantation*.

Nature which seems to have taken pleasure by the production of so many delicious Fruits, to demonstrate how far the extent of its Ingenious Fecundity could go towards Absolute Perfection, has sufficiently shewn by the admirable temper wherewith she has Enobled *Grapes*, that she had not yet Exhausted the Treasures of her Rich Invention in the making of other *Fruit-Trees*, but that whilst she was designing to enrich Mankind with such important and valuable Presents as those, she was pleased to reserve something more singular for the honour of the *Vine*, and to shew in it as 'twere a Master-piece of her surprising Art. And certain it is, she has not refused to *Grapes* no more than to other Fruits, that infinite diversity of Kinds which adds so much to their agreeableness; that is to say, that delightful variety of Colour, Taste, Bigness, Shape, Perfume, and of Maturity in all, and forward Ripeness in some, &c. For in effect, all those differences are to be found in *Grapes*, as well as among *Pears*, *Apples*, *Peaches*, *Plums*, *Figs*, &c. since there are some of them large, some small, and some long ones, round ones, sweet ones, perfumed ones, some forward ones, and some late ones; and some again of all sorts of Colours, as White, Black, Red, Yellow, Party-Coloured, &c. But Nature was minded to cut do all that, and as one may say, to sport her self in certain points, to give some advantages to the *Vine* above other *Trees*. I could specify wherein she has done it in several particulars, but I shall only instance in this one, which is, That she has regularly fastened but one Fruit of any other sort upon one single stalk, whereas the number of Grains, or Berries, that hang upon the stalk of one Bunch of *Grapes*, is so great, that it can hardly be told. She does much more than that, for sometimes she has the Complaisance not to Envy the Boldness of some Curious Persons that undertake to imitate her, or even to surpass her in some very extraordinary things; she takes it not ill, that some People not content to feed their Care and Labour succeed in the Cultivation of the *Grapes* of their own Country, that is to say, *Chasselas*, *Cloutat*, *Morillons*, *Gemmetins*, and even *Muscats*, &c. venture to transplant into Climates that are pretty Cold, those *Vine-Plants* she designed only for the hotter Countrys: Nay, she daidains not to favour their Industry, by assisting them to bring some of them to Maturity in some parts where she herself would never have thought of producing any. But yet as Liberal and Beneficent as she is, it seems she thought it would be too much against her honour, if she should be so easy as to suffer all the *Grapes* of *Egypt*, *Africk*, and *Italy*, &c. to Ripen in the Countries Neighbouring on the North; it's true indeed, we endeavour all we can, by the help of our *Walls* that are most advantageously exposed, to procure as much Heat as is required for the *Passe-Musques*, or *Passing-Musk-Grape*, the *Pergolese*, the *Damask*, and the *Musquins*, &c. And in certain Years, and certain sorts of Grounds, we have pretty good success with some of them, but there are many Years and Soils too, wherein on the contrary, we have more need of seeking some Consolation for our lost Labours, than any occasion to Rejoice at our Successes, which may be a great instruction to us, to let us see, that we are not to attempt to force Nature in every thing, and every where; no, she is a wife and understanding Mother, who looking upon all the parts of the Earth as so many Children all equally belonging to her, thought good therefore equally to dispense among them the good things, and other favours.

All Fruits thrive not every where.

*Divifa arboribus  
Patria, Trees are  
distinguished by  
thofe feveral  
Countries, as  
well as Men,  
Virg. Georg. 2.*

favours, ſhe had to beſtow upon them, ſo that the better to maintain that Union and good Intelligence ſhe had a mind ſhould Reign Eternally among them, ſhe has ſo well regulated all things, that every one of them is furniſhed with Qualifications Enabling them to Signalize themſelves by ſome kind of Productions ſingular and peculiar to them; which is the cauſe that being as 'twere Jealous, left the Order and Allotment ſhe has ſo well Eſtabliſh'd, and which ſhe is Zealous to maintain entire, ſhould be violated. ſhe very often oppoſes the Encroachments made by any of the Parties upon any of their Siſter Countries, and the Attempts by which they go about, as one may ſay, to Rob them of that which was given them for their peculiar portion. The *Anana-Grape* Ripens in the *Indies*, and the *Pergoleſe*; the *Paſſe-Muſquee*, or *Paſſing-Muſk-Grape*, and all the other principal ſorts of *Grapes* Ripen, even in the open Air in *Italy*, &c. But 'tis not ſo with them in our *Provinces*, there none of them can arrive to any tolerable Ripeneſs; and likewiſe, on the contrary, *Kernel-Fruits* proſper wonderfully among us, whereas the *Mexicans*, and *Moors*, let them do the utmoſt they can to make them grow under the *Line*, find always their endeavours baffled.

Let us now return to lay down directions, what Methods are to be uſed, to give our *Grapes* all the means poſſible to attain in our Country that Perfection which they naturally ſhould have; upon which head, we tell you, we have nothing more Sovereign for that, than the moſt advantageous *Expoſitions* of our *Walls*, and for that reaſon, in the Conteſtation here to be terminated, we ought to make it our care to treat them well, and demonſtrate by that, how much eſteem we have for their exelling Merit.

How many ſorts  
there are of  
Muſcat, or  
Muſcatelli Grapes.  
The Muſcat, the  
beſt Grapes that  
ripen in the Pa-  
riſ Climate.

Some of our Curious Gentlemen, will not plead here in general, for all ſorts of good *Grapes*, ſo as to compriſe the *Chaffſais*, *Coutant*, and *Corinth-Grapes*, but at leaſt for the *Muſcat*, or *Muſcatelli*: Now of this *Muſcat*, or *Muſcatelli*, there are Four ſorts, viz. The *Long-Muſcat*, otherwiſe called the *Paſſe-Muſquee*, or *Paſſing-Muſcat*, which is the moſt difficult of them all to be brought to Ripen, and the *White-Muſcat*, *Red-Muſcat*, and *Black Muſcat*, which Three laſt have their *Grape* or *Berry* round, and of a middling ſize, and tho' they need a great deal of Heat, yet not ſo much as the *Long-Muſcat*; in my Opinion, the *Black* one is the leaſt of them all, but the *White* ſeems to excel the Two others.

Here are de-  
ſcribed all the  
good qualities of  
an excellent  
Grape.

And indeed a *White Muſcat*, or *Muſcatelli*, whether its *Grape* be ſmall or great, 'tis no matter, ſo it be Clear, Firm, Yellow, Hard, and Cracking, and its Juice Sweet, Sugred, and Perfumed; ſuch a *Muſcatelli Grape*, I ſay, what pleaſure gives it not to him that Eats it? Can there be ſeen a more excellent Fruit during the Months of *September* and *October*, and ſometimes till the end of *November*? In Hot Countries they have admirable ones growing in the full Air, that is, upon a *Vine* planted in the open Field; but here to have any that are conſtantly pretty good, we muſt neceſſarily have re-ſourſe to the aſſiſtance of ſome  *Eaſterly* or *Southerly-Walls*. The Year 1676 particularly produced us the moſt delicious ones in the World in thoſe *Expoſitions*; and in dry and ſandy grounds, we have had better *Grapes* of them in the *Eaſterly*, than even in the *Southerly Expoſition*; from whence, thoſe Gentlemen would conclude, that a *Wall* can never be better employed, than by planting it with good *Muſcat-Grapes*.

The Pretenſions  
and Praiſes of  
Peaches.

Other Curious Perſons will hold as ſtiffly for good *Peaches*, as well for the Beauty of their Colour, (it being really the Fruit, that above all others, moſt delights the Eye,) as for its Beauty and Largeneſs, its lovely round Figure, the abundance of its Sugred Juice, and its rich and ſweet Perfume, &c. And truly their Party is likewiſe very great and conſiderable.

It is very true, there is nothing comparable to a good *Peach* in the Months of *Auguſt*, *September*, and *October*, and even in the beginning of *November* till the Froſts come; but we can have but few of them here, unleſs it be againſt *Walls*, which is a ſenſible diſpleaſure to us all, becauſe in the open Air they become incomparably better than againſt *Walls*.

Thole Peaches  
moſt admirable  
that grow in the  
open Air, and  
why.  
But ſuch not to  
be had in Paris  
Climate, but in  
ſome City-Gar-  
dens are favoured  
by the ſun, of  
Burſſerg.

And 'tis the open Air that has Evidenced to us here how far their chief Excellence can attain; the open Air which yet cannot do us any good in their favour in this Country, unleſs it be in the *Gardens*, within great Cities, which by a great number of lofty topping *Walls* of Houſes, are in the firſt place extremely well ſheltered from the Winds, and from the froſts of the Spring, and that it is which makes them bear ſo great an abundance of Fruit; for in effect, we can ſeldom ſay, we have any great plenty of *Peaches*, but when we have a reaſonable number of *Dwarf-Trees* of them, and thoſe *Dwarf-Trees* take. In the ſecond place, thoſe high *Walls* that in and augment that heat that is neceſſary to ripen their Fruit, on all ſides; and ſo in ſine, thoſe Fruits being thus expoſed to the Air, to the Zephyrs or gentle growing Winds, and to the Rain, acquire in that manner of

of ſituation, a degree of Goodneſs, which the violent ardour of the Sun reflected againſt a *Wall*, could never be able to give them equally on all parts of their Circumference. The experience we have of theſe ſingular good effects of the full Air, has made me to think of raiſing a kind of cavelling objection againſt *Wall-Plantations*; for though I know indeed for certain, that 'tis they that contribute to the Inſuring us a crop of Fruit, yet I know as certainly at the ſame time, that 'tis they that by cramping up our Fruits againſt a *Wall*, and thereby depriving them of the free enjoyment of the Air, hinder them from acquiring the full Goodneſs they naturally would have; as if thoſe *Trees* out of a Senſe of impatience and indignation at the violence and torture they ſuffer by being ſo tyed and cramped up, had a mind to puniſh us by a ſuppreſſion of ſome part of their Goodneſs, for the injury we do them in robbing them of that liberty which Nature had bleſt them withal.

In the Spring time then, I take advantage of the aſſiſtance of the *Wall*, to make the *Peaches* knit, and take the more ſurely, and at Midſummer I draw the Branches with Fruit on them forwards from the *Wall*, which after my manner of Pruning, I leave long, and with Props which I fix deep in the *Earth*, I ſupport and keep tight and firm thoſe Branches ſo laden with their Fruit, which by that Artifice, acquires that goodneſs which the open Air only can give it, and which we have newly deſcribed.

'Tis true, there is ſome Subjection and Pains required to do this well, and the Symmetry and beauty of our *Wall-Plantation* is thereby a little diſfigured whillt the Fruit is on the *Trees*, ſo that the Eyes of all Perſons that look upon it, are not ſo well pleaſed as otherwiſe, but that fault is amply recompenced, as well by the beauty of the colour, and the ſmoothneſs of the Skin, as by that rich taſte in the Fruit, which cannot be had otherwiſe. And as ſoon as the Fruit is gathered, the Branches are put back again to the *Wall*, and ſuſtained in the ſame places they were in before, ſo that no Body can ſee they have been ever meddled with. I could not forbear mentioning here this Fancy I have had for Branches ſo drawn forward.

The effect of  
that Method.

It is certain then, that almoſt all ſorts of *Peaches* placed in the full Air, in ſuch kind of high fenced *City Gardens*, as we have mentioned, ſo luckily hit to produce ſuch rare and delicious Fruit, that one would think it grew in ſome enchanted place, rather than in a *Garden* cultivated by human Art. There are only ſome *Avant-Peaches* or *Forward-Peaches*, *Troy-Peaches*, *White-Mandlins*, and backward *Viſet-Peaches*, which are not ſo happy as the reſt. Theſe laſt not finding heat enough there, and the wood of the others being too delicate and tender to endure the open Air. As for thoſe *Gardens* that are a little expoſed to the Winds, not only all their *Peach-Bloſſoms* are froſt-bitten every year, and ſo afford the owners no ſatisfaction, but alſo the wood of their *Trees* either dics, or grows ſo ſcabby and ugly, that they are little better than if they were quite dead, for which Reaſon, after I had obſtinately continued a long time to bring up *Dwarf-Peach-trees* in ſeveral *Gardens* in the Country, as I had done at *Paris*, I was at laſt forced to renounce all hopes of making them turn to account that way, and truſt only to our *Wall-Trees*.

What Peaches  
will not ſuffer  
that method,  
and why.

Courtesy-Gar-  
dens not fit for  
Dwarf-peach-  
trees, but only  
for wall-trees  
and why?

But to return to the purſuit of the Conteſtation of Fruits, concerning the point of Precedence in *Wall-Plantations*.

I do not believe any Body would offer to put up *Pears* here to pretend to Precedence in the good places in diſpute, to the prejudice of the *Muſcat-grapes*, *Peaches*, *Figs*, &c. (whatever merits *Pears* may otherwiſe have, and which we readily acknowledge in them, and particularly in the Boncretiens that are fair, large, long, and coloured with a lovely red) for we have other Fruits that undoubtedly far excell them, much leſs ſtill will any pretend to propoſe in this Diſpute, either *Apricocks*, or *Early Cherries*, or *Azerolls* or *Garden-Ham*. They would have the diſgrace of a repulſe, if they ſhould engage them in it, but we ſhall do all of them that honour which is their due, when their turn comes, ſo that their Proteſtors, if there ſhould appear any to put in any ſuch claim for them, ſhall have no reaſon to be diſcontent.

There are few perſons that have yet thought of declaring in favour of good *Plums* in this Conteſtation, I do not ſay all ſorts of *Plums*, but only four or five of the beſt ſorts. The Author Plea for, and  
and that may perhaps be, becauſe they have not yet proved with what incomparable delicacy, what exquisite taſte, and what ſugred ſweetneſs *Wall-Plums* are enriched, not only in comparison of thoſe of their own Kind, that grow in the open Air, but even of all other Fruits; a difference very ſurprizing in it ſelf, but ſtill more when we conſider how difficult it is to render a good reaſon, why a *Wall* ſhould produce ſo contrary an effect in *Plums*, to what it do's in other Fruits, it being very certain, that *Plums* very conſiderably improve in goodneſs by the *Wall*, whereas other Fruits no leſs conſiderably impair theirs in the ſame ſituation. The wall pro-  
duces a better  
effect in Plums  
than in other  
Fruit.

Perhaps, I would put my self willingly at the head of those Gentlemen that in the present Competition, would be for giving to the good *Wall-Plums*, the Precedence before all other Fruits.

And to make good my Cause, I would readily produce a Basket full of good *Violet-Perdigon-Plums* full ripe, and curiously dewed or flower'd, mixed with some white *Perdigon*, some *St. Catharine Plums*, and some *Apricock-Plums*, being well assured that the eyes of all the Spectators would be much moved to favour my Plea, by so lovely a sight, that their taste would almost convince them of its Justice; and in fine, that all that would procure me a great many Backers, and make my party considerably strong.

## CHAP. VIII.

### A Treatise of Figs.

Figs at last preferred to the first Wall-Station. Their Elogy.

\* As to the great good Mulk-Melon.

Figs are hurtful to the health.

Figs are beat twice a year. The first Fig called Fig-Flowers, and the others second Figs.

The latter Figs beat, and why.

But two sorts of Figs excellent in France, viz. the great round, and great long white Figs. The long beat, and why.

Compared with other Figs.

**B**UT good *Figs* put a peaceable end to all these Contestations, carrying away the prize without Contradiction, as being assuredly the most delicious Fruit that can be had in a Wall-plantation; I do not say, that 'tis in strict truth, the most considerable Fruit the *Earth* produces in this Country; no, in my Judgment, no Fruit can vie for excellence with a *Musk-Melon*, that is perfectly good, and well qualified, (a thing so rare, and especially in this Country, that it has given occasion to take a \* Proverb from it, to express the rarity of all that may be good). But the *Musk-Melon* has nothing to do here, it's Business is to creep on the *Earth*, whereas our dispute here is only among those Fruits which may be brought to any perfection by us in Wall-Plantations.

A good *Fig* then is that which above all Fruit deserves among us the best place in a Wall-Plantation, (though in hot Countries, a Wall might incommode it.) But to Judge by outward appearances both of its excellency, and by consequence, of the high esteem it deserves, we need but only observe the shrugging up of the Shoulders, and the motion of the Eye-brows of those that eat them, and what great quantities of them may be eaten without at all endangering the Health.

Besides, it has the advantage to bear twice a year, that is to say first, in the Months of *July* and *August*, which first *Figs* are called *Fig-Flowers*; and the second time in *September* and *October*, which are called *Second Figs*. This Advantage, I say, is of wonderful importance to the maintaining them in the first Rank, which they so rightfully ought to Possess.

I might here tell you by the way this truth, that among the second ones, those which ripen in the beginning of *September*, before there come any Frost, have in my Opinion, both a more sugred pulp, and a richer taste, and consequently are better, though a little lesser than the first, the reason of which is palpable enough, it being because the *September Figs* were formed in the fairest Season of the Year, and nourished with a juice well concocted, and wrought up to a great Perfection; whereas the *Fig-Flowers* have had all the cold, and all the Rain of the Spring-time to weather, and go through; which are two no very favourable Circumstances to any Fruits, for their acquiring a sugred, delicious, and exquisite taste.

I know several sorts of *Figs* that probably are all good in hot Countries, because they all ripen there, but we in this Country have but two sorts, which may properly be said to be admirable, and they are the *Great White ones*, of which some are *Round*, and some *Long*. The *Round* ones come in more abundance, and the *Long* ones are especially most admirable about the end of *Autumn*, when they can attain to their due Ripeness, because they are not so subject to split and chap towards their Crown, as the *Round* ones are: Which fault ordinarily proceeds from some hot Rains that fall in the Month of *October*, that make those poor *Round Figs* so swell, that they gape towards the head, with Clefts enough to fright one, and thereby vent and let out all their sweetness and perfume; so that the *Long* ones which are of better proof against those Rains than the *Round* ones, have in truth at that time a most Exquisite and Miraculous Taste, which the others have quite lost.

I have had against one *Southern-Fruit-Wall*, Twelve or Fifteen sorts of *Figs*, all of different kinds, to convince me that in this Country we ought assuredly to keep only to the *white ones*, as well for their being brought quickly to bear, and for the abundance of the Fruit they yield, as for the delicacy and sweetness of their Pulp; most of the other sorts, excepting two, which are the great *Long Violet-Fig*, the worst sort of all, and the *Flat one*, which

which is but little better, are not only hard to be brought to bear, but bring Fruit that is but small, and that is neither Delicate, Marrowy, nor Sugred enough; for the good qualities required in those are the qualities of a good Fig, to be Delicate, Marrowy, very much Sugred, and of a rich and exquisite taste.

Among those which are of a lower degree of Goodness; for we cannot well say, among the bad ones, the *Black Fig* holds the first Rank. It is very long, and pretty big, and so coloured with a dark Red, that thence it derives its Name of *Black*. It is not quite so red within, as without; it is very much Sugred, but is a little drier than our excellent *White ones*; I preserve some stocks of it for rarities sake.

There are great *Yellow ones* that are a little Red, and Flesh-coloured within; they bear little *Fruit* in the *Spring*, but a good deal in *Autumn*, but to my taste, they are not very delicate, neither in the First, nor latter Season.

There are also great *Violet-Figs*, both *Long* and *Flat*, which we just now mentioned, whose Pulp is very coarse: I prize them not.

There is also the *Green Fig* which has a very long Stalk, and a *Vermilion Pulp*, and is pretty Sweet and well Sugred, but yields little increase.

Also the little *Grey Fig* almost of a Tawny Colour, called *Melleite* in *Gascony*; its fault like that of the others, is to bear but little *Fruit*, and that not very delicate.

Also another sort called a *Medot*, which is yellow within and without.

Also another sort which is pretty black, having only its Skin a little whipt with gray; its pulp is red.

Also a *small white sort*, whose taste is rather faint than sugred, it is called a *Hasting*, or *forward Fig*, though it be so but a very little time.

Also the little *Bourjassote*, which is of a blackish, or rather of a dark *Violet* colour, like that of some *Plums*; It is very delicate, but bears little *Fruit* in the *Spring*, and seldom as ny that ripens in *Autumn*.

Lastly, There is also the *Angelick-Fig*, which is of a violet colour, and long, but not very big; Its pulp is red and reasonably good.

Having examined all these sorts of *Figs*, I think it will be most for our profit, to banish the greatest part of them, and keep only to the good *white ones*, which constantly prove better with us here than the rest. But yet if there be any curious Gentleman, that is fully resolved to have in his Garden all sorts of *Figs*, as well as all sorts of *Pears*, *Apples*, *Peaches*, *Plums*, *Grapes*, &c. So that, as one may say, he would keep a general Hospital open to receive all Fruits as well Passengers and Strangers, as others, let us pardon him that spirit of Charity; nay, if you please, let our Complaisance go so far as to praise such an unbounded Curiosity that knows no limits. But let us have a care of imitating him; no, *Exiguum Colito*. i. e. Let us cultivate a little Ground, and a few Plants, but good.

Thus you see the choice made, and the excellent Merit determined in Favour of *Figs*, in regard to Precedence of place in Wall-Plantations, as far at least as the Disposal of that honour depends on Me. Afterwards, when I shall come to garnish our Walls, I shall tell you what reasonable Quantity I counsel every one to Plant of them, in proportion to the bigness of his Garden.

## CHAP. IX.

### A Treatise of Peaches.

**L**ET us pass on to the other Fruits that pretend to the Honour of the Wall, that is to say, to *Peaches* and *Plums*, to see which of those two, next to the *Figs*, ought to have the Precedence. And let us begin with the *Peaches*. Here is an account of all the sorts I know of them, according to the Order of their usual ripening, every one of which I shall describe according to the same order, as fast as I shall speak of them.

The first of all, is, The little *Avant-white-peach*, or *Forward White-peach*; which being well exposed, ripens at the beginning of *July*, and will yield *Fruit* during the whole Month, if the stocks of it be Multiplied in several *Expositions*.

The *Troy-peach* follows it, but a little aloof off, how advantageously soever it be exposed, and ripens not till the end of *July*, or at least in the beginning of *August*. It is described, for a wonderful good little *Peach* to stir up in us the Idea and Remembrance of the excellent ones we had the *Years* before.

A Catalogue of some other sorts. The *Black Fig* is described. Its Character.

Great Yellow Fig described.

Great Violet Fig long and flat, little worth. The Green Fig described.

The little gray Fig, or Melite described.

The Medot Yellow Fig. Another Black Fig described.

The small white or Hasting Fig.

The little Bourjassote Fig described, good but not fruitful.

The Angelick Fig described.

The Avant, or Forward white Peach described. Ripen at the beginning of July. The Troy Peach ripen at the end of July, and entrance of August.

The *Yellow Alberge Peach*, and the little yellow *Pavy Alberge* ripen almost at the same time with the *Troy-peach*, or a little after; and are both of them far from being qualified with that goodness which makes us so much Esteem the other.

*Peaches that ripen in August.*

The *White Maudlin*, *Red Maudlin*, the *Minion*, and *Italian Peach* which is like a *Hasting Pessick*, ripen almost all together about the Middle of *August*, with the *White Pave*: In which Season, we may truly say, we find choice enough to satisfy our nicest Palates.

The little *Violet Alberge Peach*, and the little *Violet Pavy Alberge*, together with the *Baudin Peach*, ripen towards the end of the same Month, and play their parts incomparably well.

The *Druselles* and *Cherry Peaches*, especially those with the *Yellow Pulp*, present them selves at the same time to hear them (but *Bad* and *Nauseous*) Company. But the *white Pulp Cherry Peach* is not of that Rank, being a very pretty *Peach* when it is suffered to grow fully ripe.

*September Peaches*

The *Chevreuse*, and *Rossine* with the *Pavy Rossine*, come in at the beginning of *September*, and almost at the same time, begin the *Pessicks*, the *Violet Hastings*, the *Bellegarde*, the *Violet Brugnons* or *Nectarins*, and *purple Peaches*, to supply us plentifully for about fifteen days, which is in truth an Illustrious, Charming, and Delicious Show, or glut of Fruits; the *Violet Peach* alone, which in my Judgment, is the *Queen of Peaches*, and which appears likewise to the Palates of Persons infinitely more considerable than my self, being sufficiently qualified without the help of any others, most agreeably to satisfy the curiosity of the whole World.

The *Admirables* appear in crowds presently after the middle of *September*; good God, what *Peaches*, for Colour, Delicacy of Pulp, abundance of Juice, for sugred Sweetness, and for a rich and exquisite taste! &c. Who is there not charmed with them, and particularly with those which ripen in the open Air?

The *Nivettes*, as Beautiful and Marvellously excellent as they are, have the modelly to stay till the *Admirables* are declining before they ripen, and then they shew themselves; and for ten or twelve days, amply recompense the pains of them that planted them in a good place.

*The Nivettes come in when the Admirables are going out and are also excellent.*

The *Pain Peaches*, the *White Andilis*, and the *Narbon Peaches* press earnestly in, to accompany the *Nivettes*: But for all their Beauty, which in truth may be called but a Painted Beauty, those *Peaches*, I say, would do wisely to forbear an attempt that can turn to nothing but their own disgrace.

*The Pain, white Andilis, and Narbon Peaches, ripe at the same time, and are fair, but not good.*

We shall not say the same thing of the *Great Yellow Backward Peach*, of the *Peach Royal*, of the *Backward Violet Peach*, and of the *Yellow Smooth Peach*, of the great *Pavies*, as well *Red*, as *Yellow*, and of the little *Yellow Pavies*, called *St. Martin Pavies*: For when the Season has prov'd favourable to their ripening, the Garden Theater for the Representation of *Autumn*, seems to me very much honoured with the Company of these last sorts, during all the Month of *October*; but we must hold to them, and go no further, if we would keep our Mouths in good taste, and not suffer the *Yellow Smooth Brugnons* or *Nectarins*, the later *Violet Brugnons* or *Nectarins*, the *Nipple Peach*, the *Sanguinole*, or *Bloody Peach*, the *White Corbeil*, the *Double Flower'd* or *Double Blossom'd Peach*, the *Nur-peach*, &c. to appear, they being the last *Peaches* of *October*, and the worst of the Year, at which no body need to wonder; long Nights that are often wet, and always cold, being not very proper to make Fruits good, and especially *Stone-fruits*.

*October Peaches.*

In this list of *Peaches*, *Brugnons*, or *Nectarins*, and *Pavies*, there are reckoned thirty two very different sorts of *Peaches*; three very different sorts of *Brugnons* or *Nectarins*, and seven sorts of *Pavies*, likewise extremely differently. I need not tell the People of this Country, that we call *Peaches* those which separate from their *Stone*, our Country Men hereabouts knowing it well enough, though the *Gascous*, *Languedocians*, and People of *Provence*, and in general, all the curious Gentlemen of *Guienne* know it not so well; but it is necessary to tell all the World, that we call \* *Brugnons* all *Peach like Fruits* that being smooth skinn'd, and without any down, cleave to their Stones; and that we call *Pavies*, those that though they have a skin clothed with a little down, of what colour soever they be, whether *Yellow*, *White* or *Red*, do not loosen from their Stones. We have some curious Persons that pretend, there are as many sorts of *Pavies*, as there are of *Peaches*, and thereupon further affirm, that the *Pavie* is the Male, and the *Peach* the Female: A good luck go with their Fancy of Male and Female, or rather with the Ancient Language of Gardeners, I will not go about to find fault with it, though I never yet found any reason or colour of reason, able to satisfy me about it. But as for the great number of the pretended Males they talk of, it is altogether unknown to me; not but that I have sufficiently employed all my Endeavours to discover more of them than the eight sorts

above

above mentioned; perhaps the race of them may be kept still in *Persia*, from whence they pretend all *Peaches* first came, yet without bringing along with them that mortal quality some would make us believe they have there, or if they will needs have the *Pavies* to have all come out of that Country, those which we have not here, mult without doubt have been drowned in the long Seas by the way. I am particularly sorry for those that would have been extream forward to ripen in our Climates, we should be very happy if we could repair the loss of them, supposing that ever any such loss we had.

I know well enough too, there are some curious Persons, that reckon up more sorts of *Stone Fruits* than we have counted above; I am willing to grant, they may know some that I know not; but at least, let them be pleased to let me tell them, that after a very great and very long continued exactness in searching, I never could find any more, and I will add, that as great a Liberty has been taken in multiplying the names of *Peaches*, as well as those of other Fruits, and that the least difference, either in Flower and Colour, or in bigness and shape, or in the time of their ripeness, or in the taste and delicacy of their Juice, has always given, and still gives many People an itching Fancy, to pretend they have some new particular sort of *Peach*, upon which they fail not to Baptize it with a new Name.

The vanity of some People of multiplying species without Grounds.

O unlucky itching humour, which mayst properly enough be named, the daughter of Vanity or Ignorance, how great a Confusion dost thou occasion to us among our Fruits! Is it possible People should not know that a difference in *Seeds*, in *Expositions*, or in *Climates*, or in the tempers of *Sensens*, is able to produce those little Varieties in Fruits, which yet are not essential? Notwithstanding which, they have given me an infinite deal of Pains to discover the truth. I shall now with my ordinary Ingenuity, tell you what I think of them, though with the hazard of incurring the displeasure of a great many of our Nursery Mongers.

I am very far from desiring to suppress any sort of good Fruit, since in all places as far as my Curiosity and Acquaintance extends, I always indefatigably labour to discover some new kinds that are good, with design to multiply and propagate them as soon as they come to my Knowledge. But likewise on the other side, instead of desiring to form Chimeras and imaginary and notional beings, though never so pleasing to the Fancy, by multiplying of Names for the least inconsiderable differences, I oppose that spreading Disease with all the vigour and sincerity I possibly can; and though I have reckoned up thirty two sorts of *Peaches*, yet I do not therefore say, there are thirty two sorts of good ones, so good as I would desire them, in my Garden, or counsel my Friends to plant them in theirs; no, in that number there are some which we may truly pronounce not to be good, and accordingly I shall banish them, as much as possible from our Plantations: But likewise, though of any one kind, some should sometimes prove bad, we ought not presently to conclude, that the whole kind is therefore bad. Let us now consider exactly in what consists the excellency of some, and the meanness or badness of some others of them, that we may be so much the better able to judge upon solid Grounds, which are to be received and multiplied, and which, proscribed and entirely debarr'd of all claims to the choice places in our Wall Plantations.

## CHAP. X.

### Of the excellency of Peaches, and wherein it consists.

THE excellency of *Peaches* consists in the good qualities they ought naturally to have.

Of which the first is, to have their pulp a little firm, so as it may be just perceivable, and no more, and very fine withall, which ought to appear when their skin is taken off, which should be fine, shining and yellow, without any thing of green, and easy to slip off, which if it do's not, the *Peach* is not ripe. This Excellence further appears when we cut a *Peach* with the Knife, which is, in my Opinion the first thing to be done to them at Table, by any one that would eat them delightfully, and with a true relish, and then we may see all along where the Knife has pass'd, 'twere an infinite number of little Springs, which are methinks, the prettiest things in the World to look upon. They that open a *Peach* otherwise, oftentimes losing half that delicious Juice that makes them to be so highly esteemed by all the World.

The good qualities of Peaches. The first good quality.

A remark in cutting a Peach.

T

The

The second good quality.

The second good quality of a *Peach* is, that its Pulp melts as soon as 'tis in the Mouth; for indeed, the pulp of *Peaches* is properly nothing but a congealed water, which dissolves into a liquid form, when 'tis never so little press'd by the Teeth or any thing else. In the third place, that water or juice in melting, ought to be sweet and sugred, and of a rich, high, and vinous taste, and in some kinds of them, a little musked; I would have also their Stone little, and that those *Peaches* which are not smooth, be only covered with a reasonable proportion of soft Down, much hairiness being a certain mark of the want of competent goodness in a *Peach*, that hair usually falling almost quite off, in good *Peaches*, and particularly in those which grow in the open Air.

The third good quality.

The fourth qualification.

In fine, I should count it one of the principal qualities of a good *Peach* to be large, if we had not some little ones that are marvellously excellent; as for Example, the *Troy-Peach*, the *Red Alberger*, and the *Violet-Peaches*. However, it is at least so far true, that if the *Peaches* which should be large, come short of the bigness they should have, or much exceed it, they prove always bad; and perhaps it has been pertinently enough said by some, that these last were *Droptical*, and the others *Hectical*, or *Consumptive*. The *Hectical* ones have much more Stone and less Pulp than they should have, and the *Droptical* ones have their Stone open and gaping, and a hollow between their Stone and Pulp, which Pulp is also course, and gross, and tough, and its juice sharp or bitter.

Two faults in the bigness, distinguishing into *Hectical* and *Droptical*, and their Description.

And in reality, as I have said, there is none but the *Peaches* that grow in the open Air, which have all these good qualities in a Sovereign Degree, with something of I know not what exalted taste, which 'tis impossible to describe. The *Peaches* indeed that grow on *Wall-trees*, have some Proportion of them, but not to that degree, in which we just now observed those growing in the open Air so much excell, unless it be those that grow upon Branches, which I order to be drawn from the Wall, in the manner I have above explained.

## CHAPTER XI.

## Of Qualities indifferent in Peaches.

Indifferent qualities in *Peaches*. Which consist only in the differences of their Housers or Blossoms, which are here specified.

I Have shewn you what good qualities *Peaches* may have, besides which, they have some that are indifferent, which I place only in their Flower or Blossom; for some have great ones, as the *Avant-Peach* or *Fore-Peach*, the *Troy-Peach*, the two *Maudslins*, the *Minions*, the *Perfick*, the backward *Nipple-Peach*, the *Rossaces*, the *white Pavier*, the *Narbon-Peach*, &c. Some again have small ones, as the *Chewiesse*, the *Admirable*, the *Purple-Peach*, the *Nivette*, the *Peach-Royal*, the *Boudin*, *Bellegarde*, *Red Pavie*, *Red Alberge*, and the *Red Pavie*, *Alberge*.

Some have both great ones and little ones, but not upon one and the same Tree, as the two *Violet-Peaches*, both halting and backward, the two *Violet-Brugnons* or *Nectarins*, the *Pau-Peaches*, the *yellow Alberges*, &c.

There is but one sort that has a double Flower, which derives its Name from thence.

## CHAPTER XII.

## Of the bad qualities of Peaches.

The bad qualities of *Peaches*. The first.

LET us now take a view of the bad qualities of *Peaches*.

First, In having a Pulp too soft, and almost like Pap, to which Fault the *white Andilly-Peaches* are very subject.

The second.

Secondly, in having it like Dough or Paste, and dry, as it is in most yellow *Peaches*, and in most other *Peaches* that are suffered to grow too ripe upon the Tree.

The third.

Thirdly, In having it gross and course, as in the *Druselles*, the *Beet-Root-Peaches*, and the ordinary *Pau-Peaches*.

The fourth.

Fourthly, In having a faint and insipid juice with a green and bitter tang, as is ordinarily found in those same *Pau-Peaches*, growing upon *Wall-trees*, and in the *Narbon*, *Double-Flower'd-Peaches*, and common *Peaches*, otherwise called *Cotcil* or *Vine-Peaches*.

In

In the fifth place, 'tis a fault to have a hard skin, as the *Nipple-Peaches*; and sixthly, 'tis another fault to be sometimes so *Vinous*, as to contract from thence a *Vineous* sharp taste.

And now it can be no hard matter to judge of good *Peaches*, and amongst the good ones, to judge which are the best, no more than to judge which are bad, and among those bad ones, to judge which are the worst.

It is certain that all the *Peaches* of one certain kind, do not always prove so perfect as they naturally ought; no, nor all the *Peaches* of the same Tree neither, are not of an equal goodness.

We have already told you that 'tis a great fault in them to be too big or too little; it is likewise one to be either over, or not full ripe; *Peaches* to be just as ripe as they should be, and no more, should stick but slightly to their Stalks; for those that stick too fast to them, and cannot well be pulled without bringing the Stalk with them, are not ripe enough, and those that stick too gingerly on them, or not at all, but are perhaps already separated from them of themselves, and fallen upon the Ground, or upon the wooden Props set under them, are too *Ripe*, and are *Past*, as we say in terms of Gardening; that is, they are like dead things, and have lost all their Goodness. There are only the smoother sort of *Peaches*, all the *Brugnons* or *Nectarins*, and all the *Pavies* or *Bastard-Peaches* that can hardly be too ripe, so that in them it is no fault to fall of themselves.

Those that grow upon Branches that are beginning to turn Yellow, and are Sick, and those which ripen very long before all the rest of the same Tree, or a very long time after both the first, and the most that succeeded them upon the same Tree, are subject to prove bad, that is to say, to have all the bad qualities we have described, or at least to have a part of them; so that to meet with a good *Peach* upon a Tree, many conditions are necessary, which I shall Explain when I come to give Directions how to gather them, and how infallibly to know a very good *Peach* from one that is but indifferent.

Our Business in this Place, is only to give our Judgment which are those good kinds that deserve admittance into our *Wall-plantations*, which I shall now proceed to Declare, provided, as I have before cautioned, that for any one ill quality that may be found in any of the *Fruits* I prefer, it be not therefore concluded, the whole Species is bad; nor for any Perfection that may be found in any one of those kinds I reject, it be not thence concluded, the whole kind is really good.

## CHAPTER XIII.

## The Author's Judgment of the several sorts of Peaches.

Among the thirty two sorts of *Peaches* I have reckoned, I condemn eight, and almost nine, and the ninth which is almost excluded, is the *White Andilly Peach*. I also condemn two sorts of *Brugnons* or *Nectarins*: The eight sorts of *Peaches* are the *Narbon*, the *Druselle*, the *Yellow Smooth Peach*, the latter *Nipple Peach*, the *Beet-root-peach*, the *Cotcil*, the *Nut peach*, and the *Double Flower'd Peach*, unless any Person desire to have some Trees of this last, simply for its Flower, which is very fair, and some *Beet-root-peaches*, to make *Compotes* or wet *Sweet-Meats* with, for which they are admirable; the two disgraced *Brugnons* or *Nectarins*, are the *Yellow one*, and the latter *Violet one*, neither of them seldom hardly ever ripening here, and being subject to burst, and rot upon the Tree.

In that part of my Discourse above, where I set down the ill Qualities of *Peaches*, you may see the Reasons why I banish eight or nine sorts of them. As for the *Pavie*, I extremely honour all those of them which can be brought to ripen well; but that is something rare in this Country, unless it be those called *Hastings*: Such curious Gentlemen as dwell in hot *Climates*, and that are accommodated with Walls well exposed, do very well to plant a great many of them, and are happy enough to see them ripen in the open Air, and upon Standard Trees; and then instead of that hard and tough Pulp which they have commonly in this Country, without being accompanied with any Sugred Juice of a Vinous, Rich, and perfumed Taste, they have a fine and tender Pulp, and almost as melting as our best *Peaches*; that is to say, they have a great deal of Juice, and that Juice is seasoned with that agreeable taste we desire in them. All these advantages, together with the pleasing view of a Dark Red Colour that penetrates

The Author's Opinion and Advice about *Pavies* in this Paragraph, and the next.

penetrates through their whole Substance, but more towards their Stone, than further from it, allure People to eat of them, and consequently begets in their minds an esteem for them, and a curiosity to plant and rear them.

The Year 1676 furnished us with admirable ones, and particularly of that sort that bears the name of *Monfrons*, and of *Pompon*, from that illustrious Father and Patron of all Honest and Ingenuous Gard'ners, who first had of them in the Garden of his House at *Pompon*, and from thence afterwards propagated them in all the Gardens of the Curious. There are some Curious Persons that love them almost better than *Peaches*; we must content them, and Plant good store of them in their Gardens: But the number of the Curious of that Mind, not being very great, and we having declared particularly for the *Peaches*, we shall therefore in most of our Gardens Plant abundantly more *Peaches* than *Pavies*. Having then first shewn the Excellence of the principal *Pears*, in 'Treating of *Dwarf-trees*, and afterward of the several Merits and Excellencies of the *Muskat-Grapes*, of *Figs*, of *Peaches*, and of *Pavies*, upon the occasion of our Discourse of *Wall-Trees*, I cannot pass any further to declare my Judgment concerning the Order and Precedence to be observed in Planting of the *Trees* which are to furnish our *Walls*, till I have first done the same thing in favour of the good *Plums*, and made an Enumeration likewise of their good Qualities.

## CHAP. XIV.

### A Treatise of Plums.

Kinds of *Plums*  
almost infinite.

THERE are reckoned almost infinite numbers of kinds of *Plums*; I shall speak only of those that I have seen, tasted, and examined, which are a considerable number enough, tho' there be but few in all that multitude, that I have much esteem for.

In the Idea and Conception I form to my self of *Plums*, I see good Qualities, bad Qualities, and indifferent Qualities; and I observe some *Plums* that are good both Raw, and Baked, or Preserved, and some again that are good only to Bake, or Preserve. The good Qualities of *Plums*, are to have a fine, tender, and very melting pulp, a very sweet and sugred Juice, and a rich and exquisite Taste, which in some is perfumed: A good *Plum* is the only Fruit almost that is to be Eaten Raw, and has no need of Sugar, such are upon *Wall-Trees*, the *Violet* and *White Perdrigon*, the *St. Catharine's*, the *Apricock-Plum*, the *Reche-Courbon*, the *Empresse*, or *Latter-perdrigon*; such also upon *Wall-Trees*, are the *Queen Claudia's*, the *Imperial*, the *Royal*, the *Violet*, *Red* and *White Damask*, and even the *White Mirabelle*.

The bad Qualities of *Plums*. And some of the worst sorts of *Plums* specified.

The bad Qualities of *Plums*, are to have a hard Skin; but because there is no *Plum* without that fault, it is not to be counted for any thing considerable like those that follow, which are, to have their Pulp tough, mealy, and doughy, as the *Perdrigon* of *Cernay*, the *White Double Bless'd Plum*, &c. or sharp and sourish, as the *Black Damask-Hastings*, the *Date-Plum*, the *Moyen*, or *Pitch-Plum*, the *Brugnolle*; or dry, as the *Musked Damask Plum*, the *Moyen*, the *Amber-Plum*, the *Bull-Plum*, the *Brugnolle*, the *Rhodes*; or hardish, as the *Date-Plum*; or too watery, as many sorts of *Plums* are, which we need not know; or wormy, as the *Imperial*, many of the *Damask-Plums*, and *Diaper-Plums*, &c. and particularly all those *Plums* of all sorts that appear to ripen first upon the *Trees*, that is to say, before the set time of the Maturity of that kind of *Plum*.

And here we can say something in favour of our beloved *Perdrigons*, that they of all *Plums*, are the least subject to Worms.

The indifferent Qualities of *Plums* respect their shape, bigness, colour, ray, or parting crevice, &c. nay, and to stick fast to the Stone, is a Quality likewise indifferent, if the *Plum* be otherwise good; for if the *Plum* be really bad, then if it quits not its Stone it is more slighted than if it did; and as to the shape, it is indifferent whether the *Plum* be very long, as the *Imperial*, the *Date-Plum*, the *Ilovert*, the *Rognon de coq*, or *Cock-Kidney*.

*Perdrigons* least subject to Worms. Indifferent Qualities of *Plums*.

The shapes of *Plums*. Very Long *Plums*.

Longish *Plums*.

Round, and almost square and flat *Plums*.

Or Longish, as the *Perdrigon*, the *St. Catharine*, the *Diaper-Plum*, the *Mirabelle*, the *Long Violet Damask*, the *Datills*, or *Little Date-Plums*, the *Minions*, the *Burgundy-Moyen*, the *Rhodes-Plum*, &c.

Or Round, and almost square and flat, as the *Queen Claudia*, the *White*, the *Violet*, the *Gray*, the *Green*, and the *Musked Damask-Plums*, the *Covifets*, or *Little Cherry-Plums*, the *Cernay-Perdrigon*, the *Royal-Plum*, the *Pigeon Heart*, the *Brugnolle*, and the *Drop d'or*, or *Cloth of Gold Plum*, &c.

The Shape then is of no consequence, to make us slight or esteem any sort of *Plums*, and the colour is of no more than the Shape, there being good and bad of all Colours, which are either a yellowish white, as the *White Perdrigon*, the *White Damask*, the *St. Catharine's*, the *Apricock-Plum*, the *Minions*, the *Queen Claudia's*, the *Drop d'ors* or *Cloth of Gold Plums*, the *Great Date-Plums*, or *White Imperials*, &c.

Or else of a Violet colour inclining to red, (the first colour of them all) as the *Violet Perdrigon*, the *Reche-Courbons*, the *Empresse*, the *Imperial*, the *Long* and *Round Damask*, the *Royal-Plum*, the *Violet Diaper*, the *Cœur de Boeuf*, or *Bullock's-Heart*, &c.

Or a Violet inclining to black, as the *Brugnolle*, the *Great Violet Tours Damask*, the *St. Julian*, &c.

Or quite black, as the *Rhodes-Plums*, the latter and forward *Black-Damask*, the *Musked Damask*, the *Pigeon's-Heart*.

Or Green, as the *Ilovert*, the *Green Damask*, the *Castellan*.

Or Gray, as the *Gray-Damask*.

Or Red, as the *Covifets*, the *Prun-Moyens*, the *Datills*, or *Little Date-Plums*, &c. As well as their *Ray*, or *Crevice*, whether it be very deep cut, as in the *Plum* call'd the *Pigeon-Heart*, or but very little, as in most other *Plums*, that is of no Consequence as to their Goodness.

As for their Bigness, it is better they should be pretty big, as the *Perdrigon*, *St. Catharine*, *Apricock-Plum*, *Damask* &c. than little, as the *Mirabelle*.

There are a few sorts of *Plums* extream large, as the *Bullock's-Heart*, the *Cernay-Perdrigon*, the *Imperial*, as well white as red, and the forward and hasty, as the backward ones.

All *Plums* that are good raw, are likewise commonly very good baked or preserved, whether it be to make dry *Prunes*, or *Compotes*, or wet Sweet-meats, as the *Perdrigon*, &c. But there are some good only to bake or preserve, and even among the baking *Plums*, there are some particularly good to make *Prunes* of, as the *Reche-Courbon*, and the *St. Catharine*, and others, whose principal excellency is shewn in *Compotes*, or wet Sweet meats; the *Moyen's*, the *Castellans*, the *Iloverts*, the *Brugnolles*, the *Cloth of Gold-Plums*, the *Mirabelle's*, &c.

The Pulp in all *Plums* is yellow, in some more, and in some less; but that is of no consequence.

There are two things that seem to me to be wished for in *Plums*; First, that they would come in before the season of *Peaches*; that is to say, in the Month of *July*, because then they would be much more advantageous and helpful to us, than by coming as they do almost all in the Month of *August*, that is to say, together with the *Peaches*, but our wishes in that point are but in vain; however they maintain their Ground with them, with such marvellous good Grace and Gallantry, that they come off with Reputation.

In were to be wished in the second place, that all the good *Plums* would cleverly quit their Stones, and yet we must even have patience in this Case too, when the *Wall-Perdrigon* though ripe, and at their highest Perfection, yet leave extream fast to their Stones, and the *Reche-Courbons*, which are the sweetest and most sugred *Plums* we have, will not at all part from them.

There are also a great many bad ones that quit not their Stones, as for Example, the *Black-Bull's-Eye*, the *Amber-Plum*, the *Moyen's*, the *Ilovert*, the *St. Julian*, the *Norbert*, the *Castellan*, &c.

Those that quit them easiest, are almost all the *Damask-Plums*, of which the number is great, or at least the number of the Names People give them upon the least little differences in the World.

From all the good qualities of *Plums* that I have above noted, I conclude conformably to my Experience. That there are but four or five sorts of *Plums*, which deserve to be admitted to the honour of the *Wall*, namely the two *Perdrigons*, *White* and *Violet*, the *St. Catharine*, the *Apricock-Plum*, and the *Reche-Courbon*. However we add to them some *Empresses*, and some *Mirabelle's* too, if we please, but it must not be so much in Expectation to have them better upon *Wall-Trees* than otherwise, because they are seldom or never eaten raw, as to have them the more certainly come to good, because they, as well as most other *Plums* are subject to miscarry in the Blossom, and that yet it is of great importance, that we should have some of these last to make use of in the *Compotes* and wet Sweet-meats of the Season.



The choice Peaches  
were recommended.

Let us examine then seriously which ought to be those five Favourite sorts of Peaches we are to plant here, to fill up with the best advantage the little room we have.

I am not one of those that bring small Peaches, though the *Troy-Peach* be to my liking, one of the best that can grow, it being better to stay a little longer before we begin to have Peaches in our little Garden, that we may begin with the large Stones at the very first; and besides, we must have here such as are most certain and constant in bearing, and are least subject to be pester'd with *Ams*, and by that Rule, the *White Maudslins* will likewise be excluded for their smallness, as well as those of *Troy*.

The *Violet Hasting Peach*, is in truth, the best of all Peaches, it is that which has the most delicious and perfumed Pulp, and the most vinous, rich, and noble taste of all them, and that which with good right, might claim the first place, both here and every where else, but that it is not large enough. The *Admirable Peach* has almost all the good qualities that can be desired, and has no bad ones; It produces a goodly Tree, and is one of our roundest and largest Peaches; it is of a lovely Colour, and has a firm, fine, and melting Pulp, a sweet and sugred Juice, and a vinous, rich, and exquisite taste; it has but a small Stone, and is not subject to degenerate into a Doughy Substance; it remains a long time upon the Tree to delight the Eye, ripens about *Mid-September*, and is of great increase, that is to say in a Word, it is one of the most accomplished Peaches we know, and therefore I would by no means plant any Garden without some Tree of this, and of the *Violet Peach* too. But if I had room but for one of the two, I should without doubt prefer the *Admirable Peach* before the other, though the *Violet Peach* do really excell it in Goodness, but I should take the contrary resolution if they were both of an equal bigness. This *Admirable Peach* grows kindly enough in *Midling Exposition*, but yet it will better in good ones, and therefore to manage well the little room we have, it is better to place this Peach near the *Northern Exposition*, than any of all the other kinds, and where ever we have convenience to plant two or three Trees of it, it will be best to separate them by placing one in each *Exposition*, and always to contrive to have one of them at least in a good Situation, that so we may take advantage of experimenting what this kind is able to do in all of them.

I have here two things more to say concerning this Peach, which I have no mind neither to forget, nor to put off to another place. The first is, that contrary to the Maxim I have above laid down, the *Admirable Peaches* that ripen last upon the Tree are the best, they having had the time that Peaches need for the acquiring of a perfect maturity, for they are not Fruits to ripen or mellow off of their Trees, though one may keep them three or four days without spoiling; where note, that unless its Tree be very vigorous, this Peach is very subject to fall off half ripe, greenish, and all downy, and then all the vinous and lively taste it should have, degenerates into bitterness and sourness, and its Pulp which should be so fine and melting is coarse, and almost dry. In fine, its Stone is bigger than it should be; nay, and sometimes gapes, all very ill signs and Symptoms, which we see not in the Fruit of sound Trees, and which never fail to appear in all Peaches that fall of themselves before they be full ripe.

How to cure this  
evil Peaches.

From whence I draw my second Observation, which is, that when Trees have any of those defects, we are to reckon no more upon them almost than if they were dead; in that case, we must prune and cut them very close, to try if being reduced to a less extent, they will not shoot forth fairer and sounder Branches, and consequently bear better Fruit, and at the same time, we must put our Selves in a Condition to be able to repair the loss we are like to have in those diseased Trees, by timely planting some good Tree of the same kind in the best place we can choose for it, without which reasonable provision and precaution, we shall run the hazard of languishing under the displeasure of having for a long time nothing but *Scurvy Peaches* of that kind, which should be the best in the World.

And since we have room here for five Peach-trees we must needs have the *Minion*, the *Belle Chevreuse*, or *Fair Chevreuse*, or *Goat peach*, and the *Nivette*, to be of the number, and accordingly we shall dispose of our twelve Toises or Fathoms of Wall, in this manner.

The Fig-tree shall take the two first Toises or Fathoms.

The space between the third and fourth shall be for a first *Admirable*.

That from the fourth to the fifth, for a first *Violet Hasting peach*.

That from the fifth to the sixth, for a first *Minion*.

That from the sixth to the seventh, for a first *Chevreuse*.

That from the seventh to the eighth shall remain void, the better to facilitate the distances between the others, which must be about eight Feet.

That

That from the eighth to the ninth, shall be for a first *Nivette*.

That from the ninth to the tenth, for a first *Violet Perdigon Plum*.

That from the tenth to the eleventh shall remain void. And,

That from to the eleventh to the twelfth, for a second *Admirable Peach*.

The *Minion Peach* is certainly to the Eye, the most beautiful Peach that can be seen. The *Minion Peach* is very large, very red, fat, and round. It ripens the first of those of its Season, and has a fine and very melting Pulp, and a very small Stone; its taste indeed is not always the richest nor briskest that is, and sometimes it is a little faint and flat, but that shall not hinder it from being the third in order here.

The *Fair Chevreuse*, or *Goat-Peach*, describes to us in its beautiful name, a good part of its excellency; it ripens next after the *Minion*, and a little before the *Violet-peach*, as the *Admirable* succeeds the *Violet*, and comes in a little before the *Nivette*. So that by the means of these five Peach-trees, we may be furnish'd for about six Weeks together, with an uninterrupted successful supply of the goodliest and best Peaches of all our Garden.

The *Chevreuse* has some very considerable advantages; for first, it is hardly inferior to any in largeness, in beauty of colour, in goodly shape, which is a little longish, and in abundance of Sugred and well relish'd Juice, and over and above all that, it further excels in the great increase it yields, so that with a great deal of Juice, I place it here for the fourth. It has no other fault, than that sometimes its pulp grows Doughy, but it never contradicts that fault but when it is let to ripen too much upon the Tree, or when it grows in a cold and moist Soil, or when it meets with a Summer that is neither hot enough nor dry enough. It most particularly requires to be placed towards the East or South, and in Grounds that are not over moist: it does well enough in a *Western Exposition*. It is a very good sort of Peach, and the commonest with those that plant them only to sell.

The *Nivette*, otherwise called the *Velvet-peach*, is likewise in my opinion, a very fair and large Peach; it has so fine a colour both within and without, that it is most agreeable to look upon. It has all the internal good qualities, both of Pulp and Juice, and of taste, and of the smallness of Stone, and loads its Trees with great abundance. It is not quite so round as the *Minions* and *Admirables*, but yet comes near enough that Figure, when it grows upon a sound Branch, otherwise it is a little horned, and inclining to a longish shape. It ripens about the twentieth of September, just when the *Admirables* begin to go off, and therefore with so many good qualities as it produces to maintain its claim, who dare dispute its admittance among the *Wall-trees* in a good *Exposition*, where there is room for five Peach-trees.

If our *Midling Exposition* cannot contain above four Peach-trees, then I would fill it up with one *Admirable*, and one *Chevreuse*, or *Goat-peach*, one *Common Apricock-tree*, and one *Purple*, otherwise called a *Vinous-Peach*.

This last is one of the Peach-trees that bears in greatest abundance, and in my Judgment, in little Gardens we should chiefly aim at abundance, for which reason, I prefer it before the *Bourdin*, though that in reality, be the better tasted of the two, and thrives as well as that in a *Western Exposition*, but yields not so much Fruit. I do not place any *Maudslin-peaches* in this *Exposition* neither, nor any *Minions*, *Dandill's Bellegarde's*, &c. because they thrive not there, and are all apt there to have a Pulp too much like Dough. This *Purple-peach* denotes its colour by one of its names, and the quality of its taste by the other, and in effect, it is of a brown dark red colour, that penetrates pretty much into its Pulp. It is very round and indifferent large, its Pulp is pretty fine, and its taste rich and exquisite: In a word, it will very well maintain its place in this little Garden.

The four Trees of the *Northern Exposition* shall be *Pear-trees*, which shall be content with the distance of seven foot and a half from each other; and they shall be, one *Orange-pear*, two *Butter-pears*, and one *Verte lingue*, or *Long green pear*, all Pears that bear speedily, easily, and in great abundance.

Thus in a very little Garden whose Walls contain but about twenty two or twenty four Toises or Fathoms in compass, we shall yet have sixteen of the choicest Fruit-trees; namely, one white Fig-tree, one *Violet-Perdigon-plum-tree*, one *Common Apricock-tree*, nine Peaches, and four Pear-trees. The Peach trees shall be three *Admirables*, one *Violet-Hasting*, one *Minion*, two *Chevreuses*, or *Goat-peaches*, one *Nivette*, and one *Purple-peach*; and the four Pear-trees shall be two *Butter-pears*, one *Verte lingue*, or *Long green pear*, and one *Orange-green pear*.

After having thus furnished eleven or twelve Toises of good *Exposition*, six or seven Toises or Fathoms of *midling*, and five or six Toises, or ten or twelve yards of *bad*, which make in all four and twenty Toises or Fathoms, in a Garden that contains no more in its four Walls; I think for the better prosecuting the execution of my design, it will be very pertinent for me to continue my directions for the proportion of thirty Fathoms

The *Minion Peach* described and commended. Its defects.

The *Fair Chevreuse* or *Goat-peach* described. The order of ripening of these Peaches.

The *Chevreuse* described. Its faults, and their causes.

The *Nivette* or *Velvet-peach* described. Its bigness.

The Trees advised for the *Midling* or *Western Exposition*.

The *Purple* or *Vinous-peach*, its Character in this and the next Paragraph.

The Trees advised for the *Northern Exposition*, 4 Pear-trees, &c.

The total proportion of the choice Wall-trees advised for the finishing of a Garden of 22 or 24 Fathoms in compass.

Continued for a Garden of 60 Toises or Fathoms in compass.

A Toise is two paces, six Foot, & a half.

From which it will be continued, still augmenting to the number of 600 *Toufes* or *Fathoms* of good *Exposition*, and, 1200 in all.

*Fathoms of Good Exposition*, which make about fifteen *Toufes* or *Fathoms* for the *Eastern*, and as many for the *Southern Exposition*, and afterwards to employ the remaining thirty *Toufes* or *Fathoms* in the two other *Expositions*, allotting the one half to the *Midling* one, and the other half to the *bad* one; after which, I will fill up more and more of them, augmenting still thirty *Toufes* or *Fathoms* each time, till I come to six hundred *Toufes* or *Fathoms* of *Good Exposition*.

It methinks that in this Scheme or Project, all the World may without trouble or Confusion find what they shall need for the stocking of their *Wall-Plantations*, and in time, that the Directions which I shall give there, may afford sufficient light to those who have a greater extent of Walling to stock, how to fill it up.

1200 *Toufes* or *Fathoms* of *Wall-Trees*, enough for any subject of the greatest quality.

For I dare affirm, that unless it be for the *Garden* of some Great King, that any private Subject will find he has a terrible quantity of *Wall trees*, if he has 1200 *Toufes* or *Fathoms* of them in all, viz. 600 of very good ones, 300 midling ones, and 300 bad ones. That is to them that know the Consequence, a number great enough to fright any Man, because of the difficulty he will find in ordering and managing them to the best advantage.

What quantity of Fruit every hundred foot of *Wall-Trees* may yield, at 5 or 6 Years old, &c.

Add to this, that if we suppose the quantity of *Peaches* which every *Peach-tree* may reasonably yield at the end of five or six years, we may expect from every hundred *Stocks* of them, at least five or six thousand *Peaches*, though every *Stock* should yield but fifty or threecore each, and that will be in comparison of the crop they will yield, when they shall bear twice as many, as they may easily do at the age of eight or nine Years, &c.

To proceed then, having already furnished twelve *Toufes* or *Fathoms* of *Good Exposition*, and being minded to continue on to thirty, we must reckon that the space from the twelfth to the thirteenth *Toufe* or *Fathom*, will afford us over and above the former Number, one second *Minion Peach-tree*. And,

That from the thirteenth to the fourteenth, a second *Violet Hasting Peach*.

We shall place nothing in the space between the fourteenth and fifteenth, the better to make room for the distance of others.

That from the fifteenth to the sixteenth, shall be for a second *Chevreuse*.

From the sixteenth to the seventeenth, for a first *white Maudlin*.

From the seventeenth to the eighteenth, for a first *Perfick*.

From the eighteenth to the nineteenth, for a first *Common Apricock Tree*. And,

From the nineteenth to the twentieth, shall be left void, to give the greater scope for the other distances, as I have already said.

A remark about *Walls*.

We cannot speak well enough of the white *Maudlin Peach*, when it is planted in a good Soil, and is well exposed, only the *Ants* make War a little too much against it; and what is worse, we know not how to secure it from them, which reproachful misfortune does it a great deal of prejudice among the Curious.

To see some *Trees* of it bear abundance, and others but little Fruit, seems to give us good Grounds to say with some *Gard'ners*, that there are two sorts of them, one which they call the *great* one, and the other the *little* one; but yet for all that, neither by their Flower, which in both is large, and has but a little blush of Red, nor by the Leaf of the *Tree*, which in both is large, and very much dented, nor by their ripening, which happens to both at the same time, being towards the end of *August*, nor by their colour, bigness, shape, juice, taste, nor Stone, which are alike in both of them; no, nor by all these marks, I say, which ought to constitute an essential difference, can I find sufficient reason to persuade me to embrace the Opinion of those that think there are two distinct sorts of them, both of them being large, round, and half flat, very much painted with red on the Sunny side, and not at all on the other, and have a fine Pulp, a sweet and sugred juice, a rich taste, no red about their Stone, which Stone in them both, is short, and almost round, all which considered, suspends my Judgment as to the Point of their being two different kinds.

Besides which, I have observed, that they both produce very goodly *Trees*, and that when I have brought up *Stocks* both of that pretended sort that yielded but little Fruit, and of that that bore a great deal, and taken some grafts from that which bore a great deal, and grafted them upon those that bore but little, yet the *Trees* they produced, yielded me very little Fruit.

So that in Conclusion, I believe this difference in their bearing, proceeds only from the greater or lesser vigour of the Stock of the *Tree*; that which has a great deal, produces greater main Branches, and fewer small shoots, whereas the other on the contrary, produces lesser main Branches, and more small shoots; now the main Branches, as we have already, so many times inculcated, yield no Fruit, but 'tis the small shoots only that are the

the bearing Branches, and if we give but a larger extent of Wall to these strong and vigorous *Trees*, and leave them thick Branches enough, and leave them a little longer than ordinary, we shall see that when they have more room to spend their fury in, they will put forth no more such thick Branches, but will shoot out more small ones, and consequently will give us more Satisfaction and Pleasure.

The *Perfick Peach* is a Fruit of a marvellous increase, and of no less admirable taste; it is longish, and has all the good qualities we can wish it, when the *Tree* is in health, and is good Ground, and well exposed, and as the Stones come pretty near the Figure of their Fruit; that of the *Perfick Peach* is a little longish, the Pulp which is next to it, is but very little tinged with Red. It ripens just when the *Chevreuse* or *Gout-peach* is going off, and a little before the *Admirable* comes in, that is to say, it very commodiously chooses the time which is most advantageous to us. To go on,

From the Twentieth to the One and Twentieth *Toufe*, or *Fathom*, shall be the place of a Third *Admirable*.

And in the space between the One and Two and Twentieth, I have a great mind to place a *Violet Brugnon*, or *Nellarin*, that in this Number we may have at least one sort of Fruit, that we may carry a good way without spoiling. I have a particular value for this sort of *Brugnon*, or *Nellarin*, when it has time enough to come to full a Maturity, as to grow a little shriveled and wrinkled with it, for then in truth it is a most admirable Fruit: The Pulp of it is reasonably tender, or at least is not hard; it is pretty much painted with Red round about the Stone; and its Juice and Taste are enchantingly delicious. So many good Qualities therefore cannot but justify my Choice.

The space from the Twenty Second *Toufe*, or *Fathom*, to the Twenty Third, should be for a First *Troy-Peach*.

From the Twenty Third to the Twenty Fourth, should remain void. And,

From the Twenty Fourth to the Twenty Fifth, should be for a First *St. Catharine-Peach*.

Besides what I have before said of the *Troy-Peaches*, concerning their smallness, the time of their Ripening, and their good Taste, I have nothing else to add, but that they are very much tinged with Red, and are round, with a little kind of Teat at the end; their Flower is of the greatest Size, and we are very unhappy that we cannot defend them from the *Ants*: The *Trees*, neither of this sort, nor of the *Avans*, or *Forward Peaches*, are so large as other *Peach-Trees*, and for that reason, may be allow'd something less place than the others, which may amount to the retrenching of a Foot, or a Foot and a half for both of them: They last not so long as the rest.

The *St. Catharine-Plum* Planted against a Wall, in a good *Exposition*, and in a good Soil, will certainly surprize both those that know it but little, and those that thinking they know it, disesteem it: For in this situation, there can hardly grow a better Fruit in the World, if it may be allowed time to Ripen, so that it grows wrinkled about the Stalk: It is, as I have said, a White or Pale Yellowish *Plum*, of a longish Figure, and pretty large, and that parts very clean from its Stone.

I cannot tell whether I may not say, that, notwithstanding the ill report it always had to be absolutely good for nothing else but to make *Prunes*, I am the first that have done it the honour to advance it to the choice station of the Wall; but truly I have found it so well to answer my expectation there, that I cannot sufficiently extoll it in that respect. And as I have been always a great searcher out of Experiments, I have likewise made trial, whether there might not be some other *Plums* which might find some assistance from the Wall towards the improvement of their Excellence, as well as the *Perdizems*, and *St. Catharines*, as we found, had done; but as I shall afterwards more amply tell you, instead of meeting with any good success with them, I only found that they very much dishonoured themselves in that Noble Situation.

The Wall has almost the same effects upon these good *Plums*, as boiling Sugar has upon some certain Fruits, some of which it very notably improves in goodness, as for example, *Apricocks*; and others, it as sensibly spoils, such as are commonly *Butter-pears*, when they are Ripe enough to be Eaten Raw.

However, I am well enough satisfied, that I have found but few *Plums* receive any addition of perfection by the influence of the Wall, since at least by making trial, I am now convinced of the vanity of the hopes I once had, that they might, and by consequence, am now able to save any other Gentleman that may have the same Curiosity, the expence of time and pains that I have been at, to content it.

In the space from the Twenty Fifth to the Twenty Sixth *Toufe*, or *Fathom*, we will place a first *Yellow Admirable-Peach*.

And

And in that from the Twenty Sixth to the Twenty Seventh, a first latter Violet-Peach.

Now before I tell you what are the Excellencies of these Two *Peaches*, I must advertise you, that they must have the choicest places in the *Southern Exposition*, if we will pretend they should attain to their due Maturity; but for our encouragement, we may expect to have in them, when the *Nivette Peaches* are gone, Two sorts of *Peaches* which cannot be enough commended, and especially in forward Years, that is such as are hot and dry.

The Apricot-peach. The Sandal, or Yellow Admirable-peach.

This *Yellow Latter Admirable-Peach*, is also called the *Apricot-Peach*, and the *Sandal*: It is a *Malacooton*, as the *Yellow Pavie* is a *Malacooton*: It entirely resembles the *Admirable-Peach*, both in shape and bigness, so that it may well be named the *Yellow Admirable*, and the other barely, the *Admirable*, from which it differs in the *Yellow* Colour both of its Skin and Pulp.

In Character.

Both the one and the other are Coloured pretty much with *Red* on the sunny-side, and that *Red* pierces a little more about the Stone of the *Yellow* one, than about that of the *White* one: It is of a very good Taste, and well deserves to be here, tho' it be a little subject to grow Doughy as well as other *Yellow Peaches*.

The latter Violet, or Marble-peach. Its Description and Character.

As for the *Latter Violet*, otherwise called the *Marble-Peach*, I must needs say in its commendation, that it has certainly a vinous and delicious Taste, and when it Ripens well, surpasses all the rest: We could only wish it so much heat as it needs, for assuredly it needs a great deal. It grows a little bigger than the ordinary *Violet-Peach*, and is not so much Coloured all over with *Red*, as that; from which difference, it had the Name of *Marbled*, because that very often it is indeed but whipped or striped with a *Violet Red*: Its fault is, not to Ripen well, and to chap and burst out all over, when the end of Summer or Autumn prove too moist, or too cold: It produces a Slightly Tree, and tho' there be not Two different kinds of it, no more than there is of the other *Hasting*, or forward *Violet Peaches*, yet some Trees of it have large Flowers, and some others but little ones, just as the other *Violet Peach-Trees* do.

We must place between the Twenty Seventh and Twenty Eighth Toise, or Fathom, a first Bourdin-Peach.

Between the Twenty Eighth and Twenty Ninth we shall put nothing, to give the more scope for the distance.

Between the Twenty Ninth and the Thirtieth, we will put a first White Avant-Peach, or Forward-Peach.

Which make in all, Two and Twenty Trees, at Eight Foot distance each from the other, and there are Four Feet over-plus allowed to the *Fig-Tree*, which must have Twelve Foot to it self, when 'tis alone.

The Character of a Bourdin-peach.

We may say in favour of the *Bourdin-Peach*, almost all that has been said in praise of all the rest, saving only that commonly it is not quite so large as the *Mundins*, *Minions*, *Chevresis*, *Persicks*, *Admirables*, *Nivettes*, &c. tho' sometimes it comes very near them, which happens when because a Tree is old, we ease it of some of its Burthen, by pulling off some of its green Fruit. The new planted Trees of it are naturally a little tedious before they begin to bear, which has hindered it from being so soon admitted into little Gardens; but then when once it begins to bear, it is extremely laden with Fruit, which is the reason why sometimes its *Peaches* are not so big as they should be, but by taking care to pluck so many of them about Midsummer, as to leave only a reasonable number upon each Branch, we may be sure to have them grow large enough. What remains further to be said of them is, that they are some of the roundest, best coloured, and in fine, of the most agreeable *Peaches* to look upon, that we have; to which add, that their inside does not any way in the World give the lie to their fair external Physiognomy, and therefore when all is summed up, it must needs be a *Peach* that can spoil nothing in this Garden.

I have already said, when I was disposing of the first *Western Exposition*, where we placed four Trees, what I have to say about the *Purple-Peach*.

The Qualities and Character of an Avant or Forward-peach. Ripens a Month before the rest. Its Description.

It remains next, that we should examine wherein the *Forward-Peach*, or *Avant-Peach* excels. Its principal Excellency is then, that it is among the *Peaches* what the *Little Hasting* are among the *Pears*, and the *Cerviers*, or little *Cherry-plums* are among the *Plums*. It commonly beginning to be ripe a month before any of the other *Peaches*, and for that effect, it assumes a Pulp, grows to its bigness, and ripens at the very beginning of July. It is small and roundish, with a little teat at the end; it is very pale, that no Sun can colour it red, how hot soever it shine upon it, no more than it does the *Nabon-Peach*, as we shall afterwards shew. It has a Pulp that is fine enough, but very subject to grow Doughy; it has a little snatch of a *Peach*, which we are ravished to taste again,

gain, after we have been so long without tasting any thing like it; but most especially because it is like the *Aurora* or *Morning Star* before the *Sun*, that is to say, a *Fore-runner* to tell us the good news of the approach of the good *Peaches*, for which reason, it was thought to deserve the name of the *Avant Peach*, that is to say, the *Fore*, or *Fore-running Peach*. It is esteemed, and not only its fault of growing doughy excused, but that likewise of its not having so rich and brisk a taste as most of the others; and therefore we resolve to have one *Avant Peach-tree*, when we have room but for a dozen and a half of *Peach-trees*.

Besides, because we would not give it time enough to discover all its faults to us, it's true, we make less use of it raw, than in making *Compotes* or wet Sweet-meats of the Season, for which it is admirably good; its Flower is of the largest Size, and of so pale a yellow, that it appears almost quite white; naturally it shoots out not many Branches, and consequently produces no Slightly Tree, and therefore needs not so much room as the very *Troy-Peach*; and naturally also 'tis of all *Peaches*, one of the most subject to be annoyed with *Warts*, which inconvenience made me not very halcy to introduce it sooner among the two and twenty Trees we have planted in the thirty first Toises or Fathoms of *Good Exposition*.

Before we enter into larger Gardens, to look out there for a greater proportion of the *Good Expositions*, let us first fill up conformably to what I have above proposed, that which as we can guess, we may have of *Middling* and *Bad Exposition*, in these Gardens in which I have already newly disposed of so much as there was in them of the *Good* ones. And as both those two together, ought not regularly to take up more Walling than the two *Eastern* and *Southern* Quarters together, to which probably they are parallel, I will suppose the proportion of Wall for each of them, may amount to fifteen Toises or Fathoms apiece, to make thirty for them both, as there are thirty for the two good ones, which would fall out so indeed, if the Garden were perfectly Square, though it would be really so much the less agreeable, if it were so, because it is most desirable for the forming a Garden in the most beautiful Figure; that first, it should be twice as long, as wide. Secondly, that all its sides that are opposite one to the other, should be of an equal length; and lastly, that the whole should terminate all in right Angles, that is to say, with an equal fall of right Lines upon right Lines, as I have already shewed, when I was treating of the manner how to dispose every piece of Ground.

Those Gentlemen that shall happen to have a little less proportion of Wall, in one of their *Expositions* than I suppose, may plant so many fewer Trees there than I have prescribed, as that shall direct, and may take their measures from that place, where in passing, I have mentioned exactly the Quantity of Wall they have; But if on another side, their *Western* Quarter be of a little more extent than I may have guessed, they may multiply so many more Trees of that sort of *Peaches* they like best of those I have planted in the same *Exposition*, as will fill it up; and the *Admirable Peach* is that which of all *Peaches*, I would always most heartily advise them to Multiply.

As also in Case their *Northern Wall* has more Extent, which may very well be, they may augment the number of those *Pear-Trees*, which they find I have expressed the most esteem for, which will be either the *Butter-Pears*, the *Be-gamots*, the *Virginets*, or the *Vere Longues*, or *Long Green Pears*, as they shall find most agreeable to their palates, and most answerable to their occasions; and likewise if their *North quarter* has less room than I have supposed, they may plant so many the fewer Trees, and content themselves with that number which I have assigned for an extent of Walling equal to theirs.

We have already filled up a *Western Wall* of about five or six Toises or Fathoms extent, with four Trees, which are one *Apricot*-Tree, and three *Peach-trees*; namely, an *Admirable*, a *Chevrensis*, and a *Purple peach*.

And to another *Western Wall* of about six or seven Toises or Fathoms, I would advise nothing to be added more than the above said four Trees, to make the more room for setting out the distances between them, which should always be about eight Foot, but to that of between seven and eight Toises or Fathoms, there shall be added,

A first Bourdin peach.

To that from eight to nine, a second Admirable.

To that from nine to ten, a first white Peradigon plum.

From ten to eleven, a first Troy peach.

From eleven to twelve, a first Violet Hasting, or forward Violet peach.

From twelve to thirteen, nothing for the above said Reasons about the distances.

From the thirteenth to the fourteenth, a second Chevrensis.

From the fourteenth to the fifteenth, a second Bourdin.  
As to the Northern side, after having disposed of five or six Toises or Fathoms of it, to four Pear trees; namely, two Butter pears, one Verte longue or Long green pear, and one Orange-green pear, because the distances of the Pear-trees in this Exposition, are reasonably set out at seven foot and a half; we will further add to such a Northern Exposition, that shall contain between six and seven Toises or Fathoms,

A first Virgoule.

From seven to eight, a first Bergamot.

From eight to nine, a second Verte longue, or Long green pear.

From nine to ten, nothing, for the abovesaid reason of the distances.

From ten to eleven, a second Bergamot.

From eleven to twelve, a second Orange-green pear.

From twelve to thirteen, a third Butter pear.

From thirteen to fourteen, a third Bergamot.

From fourteen to fifteen, a second Virgoule.

And so a Northern Wall of fifteen Toises or Fathoms, would be furnished with twelve Pear-

trees.

The effect of  
the Northern Ex-  
position in Pear-  
trees.

All the Pear-trees I place to the Northern Wall, fail not to produce there both goodly Trees and fair Fruit; 'tis true, they may want something of a good taste, but if we perceive it, we may soon remedy it with a little Sugar. And therefore we shall have no reason at all to be dissatisfied for having planted some good Pear-trees in this Northern Exposition, instead of leaving it bare, or of planting it only with Filaria or Honey-suckle, as many do.

I suppose always, that this Northern Wall should in Summer time, have an hour or two's aspect of the Sun; for if it had none at all, or next to nothing of it, the Fruit would hardly come to any good there.

In this Disposition which I have newly Regulated, of a Garden containing Sixty Toises or Fathoms of Walling, allowing each Wall fifteen Toises or Fathoms, and planting them with such Trees that may prosper there, we should have in all, forty five good Trees, namely one Fig-Tree, twenty seven Peach-Trees, two common Apricock-Trees, two Violet-Perdrigon Plum-Trees, and one St. Catharine Plum-Tree.

The twenty seven Peach-Trees should be five Admirables, three Violet Hastings, or Forward Violet Peaches, two Miniotti, four Chevenets, one Nivette, one White Maudlin, one Perfick, two Troy-Peaches, one Yellow Admirable, one Latter Violet Peach, two Bourdins, one Avant Peach, or Forward Peach, and one Violet Brignon, or Nektarin.

The Twelve Pear-Trees should be three Bergamots, three Butter Pears, two Virgoulets, two Verte Longues, or Long Green Pears, and two Orange-Green Pears.

With this Provision, we may boast, that though we have in our Garden but thirty Toises or Fathoms of Wall in a good Exposition, and fifteen in a Midling one, we have not ill furnished them; since we have placed in that small Space, at eight Foot distance one from the other, all the most considerable Peaches our Country affords, with the best of all our Fig-Trees, three Excellent Plum-Trees, and two Apricock-Trees.

Well understanding and meaning always, that the Apricock and Plum-Trees should be dispersed among the Peach-Trees, and be placed in respect of them, at an Equal distance one from the other, so as that there may be between a Plum Tree, and an Apricock-Tree, five or six Peach-Trees; and so on.

The Plum-Trees and Apricock-Trees are not so Subject to die young, in part or in whole, as the Peach-Trees, and therefore are able, as one may say, to support in some manner the Honour of the Wall-Plantations, when there happens any striking accident, or Mortality to the poor Peach-Trees.

However I do not always mix Plum-Trees with Peach-Trees, though they do them no harm, but I sometimes plant whole Walls with nothing but Plums, when I have Walling Enough; nay, and sometimes I make some little Gardens all of Plum-Trees, when the disposition of the Ground will permit me.

Let us now return and proceed on to a Good Exposition that may contain between thirty, and one and thirty Toises or Fathoms, that we may have room to place a second Fig-Tree, near the first, the one being planted against the Southern Wall, if we have one, and the other against the Eastern one, in case likewise we have one, or else both of them shall be placed in one of those Expositions, if either of the two be wanting: next to that,

The Space between thirty one and thirty two Toises or Fathoms, shall be for a third Violet Missing Peach.

That from thirty two to thirty three, for a third Minion.

That from thirty three to thirty four, shall be left void, to make good the distances.

From thirty four to thirty five, for a second White Maudlin.

From thirty five to thirty six, for a first forward or Hasting Apricock.

From thirty six to thirty seven, for a second Violet Perdrigon Plum.

From thirty seven to thirty eight, for a second Nivette Peach.

From thirty eight to thirty nine, shall go only to make out distances.

From thirty nine to forty, shall be for a first Italian Peach.

The Italian Peach is a Kind of Hasting or forward Perfick, and resembles in all things the Perfick, in its Bulk, which is noble, its figure which is longish, with a little tear at the end, its colour, which is of a fair, but deepish Carnation, its good taste, and its stone, &c. But this ripens about the middle of August, that is to say, full fifteen days before the other. In a word, 'tis very certain, that 'tis an Excellent Peach, next which the space

From forty Toises or Fathoms to forty one, shall be for a second Troy Peach.

From forty one to forty two, for a first Royal Peach.

From forty two to forty three, for a first Rossane.

From forty three to forty four, shall be kept void.

From forty four to forty five, shall be for a first Violet Allberge-Peach.

I add here one after another three sorts of Peaches, I had not yet Planted. The Royal Peach is a Kind of Admirable, only it is always more lateward, and of a darker Red with out, and still a little more tinged near the stone than that, in every thing else it is perfect like the Admirable, and by consequence, is admirable itself, that is to say, most Excellent. The Rossane resembles the Bourdin Peach in shape and Bulk, and is different from it in the colour of its skin and Pulp, which in this latter are yellow. Both of them take strong tincture of Red from the Sun, that is to say, a very dusky Red: This Peach is very fruitful, and of a very good taste, and has no other fault but that it is apt to grow Doughy, to avoid which distastful inconvenience, we must not let it grow too ripe on the Tree.

The Red Allberge is one of our prettiest Peaches for its vinous and rich taste, if we let it grow ripe enough, otherwise its pulp is hard, as is that of all other Peaches not ripe; it is no bigger than a Troy peach, and is pretty like it, but that it seems to me more coloured with red. The only fault of all those incident to Peaches, that can be objected against this, is that it is not large.

The space from forty five to forty six Toises or Fathom, shall be for a second Perfick.

From forty six to forty seven, for a second Violet Brignon, or Nektarin.

From forty seven to forty eight, for a first Apricock Plum.

From forty eight to forty nine, shall remain void.

From forty nine to fifty, shall be for a first Red Maudlin Peach.

Though the Apricock Plum that grows upon a Standard Tree in the open Air, be better to eat raw than a St. Catharine; yet in my Opinion, the St. Catharine out-tops it by a very great height, in a Wall-Plantation. These two Plums are much like one another, and I see no other difference, than that the Apricock Plum comes nearer a round Figure than the other, and has some red spots not seen in the other.

The Red Maudlin which is the same with the Double Troy peach, or Country, or Pea-lum peach, and which notwithstanding the multiplying humour of those which would make different kinds of it, is round, flat, and sinking, very much coloured with red without, and pretty much within, is indifferent large, and apt to grow double, and twin-like, which is not very agreeable, and hinders it from producing fair Fruit; its Flower is large and high Coloured, its pulp is not very fine, but its taste is good enough, yet it is methinks nothing near so excellent a Peach as all those are which we have planted before it; though in certain places I have seen it improve to a wonder, both in bigness and good taste, for all which, I believe its Friends will hardly blame me for not having well placed it, and at worst, if those Gentlemen like it not so well in this place, they may do it the honour to advance it to the station of any of the foregoing ones which they can find in their Hearts to displace for its sake.

In the place between fifty and fifty one Toises or Fathoms of Wall, we will put a first Belle-garde.

That from fifty one to fifty two, shall be for a second latter Violet Peach.

From fifty two to fifty three, for a second Bourdin.

From fifty three to fifty four, shall be employed for making good distances.  
 From fifty four to fifty five, shall be for a first Diaper Roche Courbon Plum.  
 That from fifty five to fifty six, shall be for a first Purple Peach.  
 From fifty six to fifty seven, for a second yellow Admirable.  
 From fifty seven to fifty eight, for a third White Maudlin, or rather for a first white Pavie, for those that love it.  
 That from fifty eight to fifty nine, shall remain void.  
 From fifty nine to sixty, shall be for a second Chevreuse, or rather a great Red Pavie of Rome.

pone.

The Bellegarde is a very fair September-Peach; it is a little sooner ripe, and a little less tinged with red, both within and without, than the Admirable, and its pulp is a little more yellowish, and perhaps its taste not quite so rich, otherwise for its Bulk and Figure, it might be mistaken for an Admirable, but it produces not so goodly a Tree as that.

The Roche Courbon Plum may be well enough known by what we have already said of it above, when we were treating of the qualities of Plums. Certainly we have not a more sugred Plum than that.

The White-Pavie differs not at all from the White Maudlin-Peach, in its whole outside, only in the opening and eating of it, we find it to be a Pavie; that is to say, it has a firm pulp sticking fast to the Stone, and has a good brisk taste enough, when it is full ripe.

The red Pavie of Ponthone, or the Monstrous Pavie is monstrous indeed, that is to say, it is prodigiously large, being sometimes thirteen or fourteen inches about, and of the loveliest red colour in the World; and in earnest, nothing is so delightful to behold, as to see a good handsome quantity of them upon a goodly Wall Tree. It is a light that almost dazzles the Eyes, and when besides all these other advantages, they come to ripen well, and in fair weather, a Garden is much honoured in being adorned with them, a Hand well satisfied to hold them, and a Mouth most exquisitely pleased in eating them.

Let us now furnish again our Western Walls from those of fifteen Toises or Fathoms in length, which we have already planted, to those of thirty, after which we will do the same thing for the Northern ones of the same extent, and so we shall see by that, what quantity of good sorts of Fruits, a Garden of Six-score Toises or Fathoms, or of two hundred and forty yards in Compass, may have of good Fruits, whether it be a perfect, or an oblong square.

To a Western Wall-Plantation then, of between fifteen and sixteen Toises or Fathoms, we will further add a first Italian Peach.

From sixteen to seventeen, a third Admirable.  
 From seventeen to eighteen, nothing.  
 From eighteen to nineteen, a second Troy Peach.  
 From nineteen to twenty, a second Violet Hasting, or forward Violet Peach.  
 From twenty to twenty one, a second Apricot-tree.  
 From one to two and twenty, a first for ward or Avant Peach.  
 From twenty two to twenty three, nothing.  
 From twenty three to twenty four, a first Persick.  
 From twenty four to twenty five, a first latter Royal Peach.  
 From twenty five to twenty six, a first Nivette.  
 From twenty six to twenty seven, a first Violet Brugnons, or Violet Nectarin.  
 From twenty seven to twenty eight, nothing.  
 From twenty eight to twenty nine, a first Boncretien Pear.  
 From twenty nine to thirty, a first Autumnal Bergamot.

Methinks, where we have convenience in a Garden to place in a Wall-Plantation, no fewer than fifty three good Peach-trees, six good Plum-trees, four Apricot-trees, and two Fig-trees, and having still room for a couple of Trees in the Western Quarter, we cannot do better than to fill them up with one Boncretien, and one Bergamot Pear-tree, since they both prosper very well in this Exposition. All the World is acquainted with their Excellency, and are not ignorant how difficult it is to raise any of them otherwise than upon Wall Trees; so that in my Judgment, we shall do very well to plant them in a Garden of this Proportion; according as our Gardens shall grow more spacious, we shall plant more of them, and we shall come to some, where we will plant whole Walls of each kind.

The above said Distribution contains three and twenty Trees, which according to an equal Proportion, should be allowed but seven foot ten inches a piece; but we will allow them all but the two last, full eight foot, and what remains shall be divided between the Pear-trees, for which it will be sufficient.

The Northern Wall which contains over and above what we have already stocked.

From fifteen to sixteen Toises or Fathoms, should be filled up with a first Ambret pear.  
 From sixteen to seventeen, with a second Ambret.  
 From seventeen to eighteen, with a first Lefschafferie.  
 From eighteen to nineteen, with a second Lefschafferie.  
 From nineteen to twenty, with nothing.  
 From twenty to twenty one, with a first Apricot-tree.  
 From twenty one to twenty two, with a fourth Butter-pear.  
 From twenty two to twenty three, with a fifth Butter-pear.  
 From twenty three to twenty four, with a third Bergamot.  
 From twenty four to twenty five, with a second Verte longue, or Long green pear.  
 From twenty five to twenty six, with nothing.  
 From twenty six to twenty seven, with a first Dry Martin.  
 From twenty seven to twenty eight, with a second Dry Martin.  
 From twenty eight to twenty nine, with a first Bugie.  
 That from twenty nine to thirty, with nothing.

And thus in a Garden of a hundred and twenty Toises or Fathoms in Compass, the two Good Expositions of which might take up about sixty of them together, and the other two about the same proportion, we should have in all, fourscore and eleven Trees; namely, two Fig-trees of the white round sort, six Apricot-trees, six good Plum-trees, two Pavies, three Violet Hasting, or Forward Brugnons, or Nectarins, forty seven Peach-trees, and twenty five Pear-trees.

The six Plum-trees are two Violet Perdrigons, one White Perdrigon, one St. Catherine, one Apricot-plum, and one Roche-Courbon. Among the Apricot-trees, there are one of the Hasting or Forward sort, and five Ordinary ones; the two Pavies are one White, and one Red one, the three Violet Brugnons, or Nectarins, are all of the Forward or Early sort. The forty seven Peach-trees are two Forward or Avant Peaches, four Troy Peaches, one Red Alberge, two White Maudlins, one Red Maudlin, four Minions, two Bourdins, one Rof-sme, one Italian Peach, four Chevreuses, four Violet Hasting, or forward Violet Peaches, three Nivettes, two Yellow Admirables. I have already reckoned to you above, what Peach-trees I have placed to the Westward, because they prosper reasonably well in that Situation. The twenty five Pear-trees are one Winter Boncretien, four Autumnal Bergamots, five Grey Butter Pears, four Virgulees, two Ambrets, two Lefschafferies, two Dry Martins, two Verte longues, or Long Green Pears, two Orange-green Pears, and one Bugie, and all these in the North part, except only one Boncretien, and one Bergamot, which we have placed towards the West.

To continue on still what I have proposed, I will next stock thirty Toises or Fathoms more of the Good Expositions, with fifteen of the Midling, and fifteen of the Bad one, placing always the Trees in the good Exposition, and in the Midling one, at eight foot distance one from another, and in the Bad one, but at seven and a half; therefore to avoid mistakes, before we proceed to plant any thing in them, let us always first begin with making 10 many holes at regulated and prescribed distances, as we know we have Trees to plant.

Accordingly then in the Good Expositions, we shall assign for the Toises or Fathoms extending

From sixty to sixty one, and from sixty one to sixty two, and from sixty two to sixty three, and from sixty three to sixty four, two Fig-trees of the White sort, which shall be planted next after, and adjoining to the two first, on each side of the Corner that joins the East and Southern Walls, for no less than four Toises or Fathoms will serve them two.

From sixty four to sixty five Toises or Fathoms, a fourth Admirable.  
 From sixty five to sixty six, nothing.  
 From sixty six to sixty seven, a third Violet Hasting Peach.  
 From sixty seven to sixty eight, a fourth Minion.  
 From sixty eight to sixty nine, a third white Maudlin.  
 From sixty nine to seventy, a third Chevreuse.  
 From seventy to seventy one, nothing.  
 From seventy one to seventy two, a third Violet Perdrigon Plum.

From seventy two to seventy three, a third Troy Peach-tree.  
 From seventy three to seventy four, a third Nivette.  
 From seventy four to seventy five, nothing.  
 From seventy five to seventy six, one *Rossane* Pavie.  
 From seventy six to seventy seven, a second forward Apricock-tree.  
 From seventy seven to seventy eight, a second Perfick peach.  
 From seventy eight to seventy nine, nothing.  
 From seventy nine to eighty, a second Red Allerge.  
 From eighty to eighty one, a third latter Violet Peach.  
 From eighty one to eighty two, a third yellow Admirable.  
 From eighty two to eighty three, nothing.  
 From eighty three to eighty four, a second Italian peach.  
 From eighty four to eighty five, a first white Perdrigon plum.  
 From eighty five to eighty six, a second Forward, or Avant Peach.  
 From eighty six to eighty seven, nothing.  
 From eighty seven to eighty eight, a fourth White Mandlin.  
 From eighty eight to eighty nine, a third Common Apricock-tree.  
 From eighty nine to ninety, a fifth *Hasting*, or Forward Violet Peach.  
 And that makes two and twenty Trees for thirty Toises or Fathoms of Wall. Let us next see what we shall place in the fifteen Western, and the fifteen Northern Toises or Fathoms, to compleat this Garden which may have forty five Toises or Fathoms of Walling towards each Exposition, and consequently, a hundred and fourscore Toises or Fathoms in Compass, for all its four sides.

For the space then between thirty and thirty one Toises or Fathoms of the Western Wall, we will assign a fourth Admirable Peach.

And for that from thirty one to thirty two, nothing.  
 From thirty two to thirty three, a third Chevreuse.  
 From thirty three to thirty four, a second Peach Royal.  
 From thirty four to thirty five, a third Violet *Hasting*, or forward Violet Peach.  
 From thirty five to thirty six, a third Troy Peach.  
 From thirty six to thirty seven, nothing.  
 From thirty seven to thirty eight, a third Bourdin.  
 From thirty eight to thirty nine, a second Forward, or Avant Peach.  
 From thirty nine to forty, a second Italian Peach.  
 From forty to forty one, nothing.  
 From forty one to forty two, a first Violet Perdrigon Plum.  
 From forty two to forty three, a third Apricock-Tree.  
 From forty three to forty four, a second Nivette.  
 From forty four to forty five, nothing.  
 And there you have eleven Trees for the fifteen Western Toises or Fathoms of Wall. In the Northern Division, we will assign for the Place  
 From thirty to thirty one Toises or Fathoms of Wall, a fifth Virgoulee Pear.  
 From thirty one to thirty two, a fourth Bergamot.  
 From thirty two to thirty three, a sixth Butter Pear.  
 From thirty three to thirty four, a third Verre-longue, or Long Green Pear.  
 From thirty four to thirty five, nothing.  
 From thirty five to thirty six, a third Ambret.  
 From thirty six to thirty seven, a third Lefchafferie.  
 From thirty seven to thirty eight, a third Dry Martin.  
 From thirty eight to thirty nine, a second Apricock-tree.  
 From thirty nine to forty, nothing.  
 From forty to forty one, a third Orange-Green Pear.  
 From forty one to forty two, a first melting Bressl Pear.  
 From forty two to forty three, a sixth Butter Pear.  
 From forty three to forty four, nothing.  
 From forty four to forty five, a seventh Butter Pear.

And so for a hundred and fourscore Toises or Fathoms of Walling, of which there may be forty five to the East, forty five to the South, forty five to the West, and forty five to the North, we shall have a hundred thirty six Trees, viz. Threecore and eighteen Peach-trees, thirty six Pear-trees, four Fig-trees, nine Plum-trees, and nine Apricock-trees, whereof two the forward fort.

Among the threecore and eighteen Peach-trees, there are three Pavies, viz. one *White Hasting*

*Hasting* Pavie, one *Latter Red* one, and one *Rossane Hasting* Pavie, three *Hasting* or *Forward* Violet Brugnons or *Nellavins*, and threecore and twelve Peach-trees, strictly so called, which are three Forward or Avant Peaches, six Troy Peaches, two Red Allerges, four White Mandlins, one Red Mandlin, six Minions, three Bourdins, one *Rossane*, three Italian Peaches, six Chevreuses, eight Forward or *Hasting* Violet Peaches, three Perficks, one Bellegarde, eight Admirables, two Purple Peaches, three latter Royal Peaches, four latter Violet Peaches, five Nivettes, and three Yellow Admirables.

The nine Plum-trees are four Violet Perdrigon, two White Perdrigon, one St. Catharine, one Apricock Plum, and one Roche-Combon.

The thirty six Pear-trees are one Winter Boncretien, five Autumnal Bergamots, seven Grey Butter pears, five Virgoulees, three Ambrets, three Lefchafferies, three Dry Martins, three Verre longues, or Long Green Pears, three Orange-Green Pears, one Melting Pear of Bressl, and two Bugies.

If I were obliged to furnish two Good Expositions, which instead of having fourscore and ten Toises or Fathoms of Wall to them two, had a hundred and twenty, so that I had about threecore Toises or Fathoms in each Wall-plantation, instead of forty five, whether it consisted all of one Wall, or were parted into several; I would, if I might follow my own Inclination, fill up the fifteen additional Toises or Fathoms, with two Fig-Trees, which would take up near four Toises or Fathoms; with fifteen foot of White Muscat, and three of Red Muscat Grapes, which placing them at two foot distance one from the other, would take up six Toises or Fathoms, and in nine foot of Chaffels, which would take up three Toises or Fathoms, and in six foot of Corinthian Grapes which would take up two Toises or Fathoms. And I would place all these Grapes apart, as I have already told you. Besides the Goodness of the Grapes which is very considerable; we have need likewise of the leaves of their Vines during the Month of October, to help to garnish our Dishes when Flowers begin to grow scarce.

The Chaffels, otherwise called the Bar-Sur-Aube, is a very sweet Grape, which produces fair and large Chylers; and its grain or Berry is large and crackling: It keeps longer than any other Grapes, and gives marvellous pleasure when it so presents it self out of the common season for Grapes. There is both a Red and Black sort of them, which I do not like so well as the White.

The White Corinth or Corinthian Grape is a very Sweet Grape: the Bunches are small and long, and its Grains or Berries, Small, and sticking close together, and have no Stones. The Red sort is not better than the White. It is good to have some Vines of this Grape, when we have any reasonable proportion of Walling, and especially towards the South; for in any other Exposition, neither the Muscat nor the Corinthian Grape will prosper: But when we have a good Southern Wall, there is hardly any thing more agreeable than to gather at the same time in ones Garden, a Basket of fair Peaches, another of good Muscat Grapes, one of Corinthian Grapes, and another of fair Chaffels. The manner of Eating Corinthian Grapes, is different from that of Eating all other Grapes, which we Eat Grape by Grape, whereas the Corinthian Grape, is Eaten by whole Bunches like Plums, &c.

The fifteen Additional Toises or Fathoms towards the East, to make up sixty, shall be disposed of in this Order, In the place

From forty five to forty six Toises or Fathoms, shall be a second St. Catharine Plum.  
 From forty six to forty seven, a fourth Violet Brugnons, or Nellarin.  
 From forty seven to forty eight, a fifth Admirable.  
 From forty eight to forty nine, nothing.  
 From forty nine to fifty a second Bellegarde.  
 From fifty to fifty one, a fourth Chevreuse.  
 From fifty one to fifty two, a fourth Troy Peach.  
 From fifty two to fifty three, Nothing.  
 From fifty three to fifty four, a fifth White Mandlin.  
 From fifty four to fifty five, a second Bourdin.  
 From fifty five to fifty six, a seventh Minion.  
 From fifty six to fifty seven, nothing.  
 From fifty seven to fifty eight, a third common Apricock-Tree.  
 From fifty eight to fifty nine a first White Andilly Peach.  
 From fifty nine to sixty, nothing.

I am induced to place here a *White Andilly Peach*, as well in consideration of its The *White Andilly Peach*.  
 Goodly Sirname, as because it is a Peach of great increase. It is fair to look upon, its Description  
 Large, Round and flat; it takes a very lively red colour in the Sun, but has no red and Character-  
 within.

within. It gives some satisfaction when we let it not ripen too much upon the Tree till it grows Doughy.

The fifteen *Toufes* or *Fathoms* Augmented towards the West, shall furnish us for the place Extending

From forty five to forty six, a *Toufe* or *Fathom*, a second Violet Perdrigon Plum.

From forty six to forty seven, a sixth Admirable Peach.

From forty seven to forty eight, a fourth Chevreuil.

From forty eight to forty nine, nothing.

From forty nine to fifty, a Third latter Royal Peach.

From fifty to fifty one, a fourth Hasting or forward Violet Peach.

From fifty one to fifty two, a seventh Admirable.

From fifty two to fifty three, a first Mirabelle Plum.

From fifty three to fifty four, nothing.

I have already sufficiently Expressed above, my Sense concerning this Plum, which is Small, White, and a little tawny. Its Tree bears an Infinite quantity of Fruit, which separates from the stone. This Plum is indifferent good to Eat Raw, but is most particularly Excellent to preserve, whether it be to make Sweet-meats, to keep, or to Eat presently. In the space

From fifty four to fifty five, a second Violet Brugnons, or Neclarins.

From fifty five to fifty six, a second Boncretien Peach.

From fifty six to fifty seven, a second Autumnal Bergamot.

From fifty seven to fifty eight, nothing.

From fifty eight to fifty nine, a third Boncretien Pear.

From fifty nine to sixty, a third Bergamot.

The Western Division of fifteen *Toufes* or *Fathoms* of Wall, with the precedent one of like length, Furnish us three and twenty Trees.

The Fifteen Additional *Toufes* or *Fathoms*, towards the North quarter, will furnish us for the place Extending

From forty five to forty six *Toufes* or *Fathoms*, a fourth Verte-Longue or Long Green Pear.

From forty six to forty seven, a sixth Virgouleze.

From forty seven to forty eight, a fifth Bergamot.

From forty eight to forty nine, nothing.

From forty nine to fifty, a first Winter Thorn Pear.

From fifty to fifty one, a first Marvel Thorn Pear.

From fifty one to fifty two, a third Bugie.

From fifty two to fifty three, a fourth Ambrett.

From fifty three to fifty four, nothing.

From fifty four to fifty five, a third Apricock-Tree.

From fifty five to fifty six, a fourth Lechasserie Pear.

From fifty six to fifty seven, a second Winter Thorn Pear.

From fifty seven to fifty eight, a second Marvel Thorn Pear.

From fifty eight to fifty nine, nothing.

From fifty nine to sixty, a seventh Virgouleze.

And there are twelve Trees for the fifteen Northern *Toufes* or *Fathoms*, as there were fifteen for the proceeding fifteen *Toufes* or *Fathoms*, at the allowance of seven foot and a half for each Tree.

And here it may be observed, that though in Planting each *Exposition*, I have all necessary regards for the due keeping of the general proportion of all the Fruits of all the four Walls of every Garden, consider'd all together, so that they may make but one whole and uniform compound, yet in setting down the Fruits of each Division separately; I number them without any respect to the Fruits of the others, that they that please to make use of my advices, may readily see in a moment, both what Fruits, and what number of Trees of each kind, I place in every *Exposition*, so that when towards the last *Toufes* or *Fathoms* of Wall, of any one of the four Walls; they shall see set down for Example: A seventh Virgouleze-Pear, a third Common Apricock-Tree, a sixth Admirable-Peach, &c. they may know, that in such an *Exposition*, there are Seven Virgouleze Pear-Trees, three Apricock-Trees, six Admirable Peach-Trees, &c. without mistaking me, because of that, as if I meant, there are but so many Trees of such a kind, &c. In the whole Garden.

And in fine, because after I have stocked four Walls, each of fifteen *Toufes* or *Fathoms* extent a piece, I presently subjoin a general Recapitulation of all the Trees I have planted from the first beginning of our Wall plantations as far as that proportion: All Gentlemen

lemen concerned may easily see at one view, by that Recapitulation, how many Trees there enter into a Garden; for Example, of sixty *Toufes* or *Fathoms* extent, how many into one of a hundred and twenty, how many into one of a hundred and fourcore, and how many into another of two hundred and forty, and at the same time, they may see by the particular account above set down, how that number of Trees is distributed in each *Exposition*. In my last Recapitulation, I have set down all the Fruit that are to stock the Walls of a Garden, of a hundred and fourcore *Toufes* or *Fathoms*: Take now that of another Garden that may contain two hundred and forty; and that should be of fifteen foot of White Muscat, and three of Red Muscat or Musk Grapes, nine foot of White Chassels, and six of White Corinthian Grapes; six White Fig-Trees, fourcore and ten Peach-Trees, fifty one Pear-Trees, eleven Apricock-Trees, and twelve Plum-Trees: Among the fourcore and ten Peach-Trees, there are three Forward or Avant Peach-Trees, seven Troy Peaches, two Red Alberges five White Maudlins, one Red Maudlin, seven Minims, four Bourdins, one Rossane, three Italian Peaches, eight Chewenches, nine Hasting or Forward Violet Peaches, three Persicks, three Bellegardes, eleven Admirables, two Purple Peaches, four Latter Royal Peaches, four Latter Violet Peaches, five Nivettes, three Yellow Admirables, five Violet Brugnons or Neclarins, one White Andilly Peach, and three Pavies, viz. The White Hasting, or Forward Pavia, the Hasting or Forward Rossane Pavia; and the Red Latter Pavia.

Among the twelve Plum-Trees, there are five Violet Perdrigons, and two White ones, two St. Catharines, one Apricock Plum, one Rochecourbon, and one Mirabelle.

Among the eleven Apricock-Trees, there are two of the Hasting or Forward sort, to place towards the South, and nine more to plant in all the other *Expositions*.

Among the fifty one Pear-Trees, there are three Winter Boncretiens, eight Autumnal Bergamots, seven Butter Pears, seven Virgoulezes, four Ambrets, four Lechasseries, two Winter Thorn Pears, two Mareuil Thorn Pears, three Dry Martins, four Verte Longues or Long Green Pears, three Orange-Green Pears, three Bugies, and one Melting Pear of Brest. These sorts of Recapitulations so frequently made, may seem impertinent and tedious to those that have no need of them; And with a good luck, 'e'en let them do so for me, It is not for them I here am at work: But those Gentlemen that have need of such Directions, will doubtless think themselves in some measure obliged to me for them; and if they have a mind to know what pains they cost me, (which I may say was one of the greatest of my whole Work) they need but try by way of Divertissement, to make the Distribution of the Trees for the furnishing of two or three Gardens of different bignesses, always proposing to themselves, to plant in them all the choicest Fruits that are to be had, without intermixing any bad with them, and taking care to place in every *Exposition* what may prosper in it, and to observe a Reasonable proportion of every kind of Fruit, according to the bigness of the Garden; And then they will be able to judge whether I have not done a pleasure to our Gentlemen Gard'ners, by thus saving them the Labour of drawing up an account of all those particulars so long and so tiresome, as that I all along deliver, and set down.

If I had a hundred and fifty *Toufes* or *Fathoms* of well exposed walling, whether it were but to one only aspect of the South, or one only aspect of the East, or to two aspects, one of the Southern, and the other of the Eastern Sun, I should probably enough determine to plant a Dozen of Early or Hasting Cherry-Trees, but it must be sure to be towards the South, because we are not easily induced to spare so important a part of our Garden, for the rearing and producing of that little sort of Fruit, but by the hopes of having it very early indeed, which we can never attain to but by the means of a very hot *Exposition*; now the Eastern one, is not of sufficient warmth for that; and therefore besides all the Grapes, and other Fruits already assigned for our good *Expositions*, we should have twelve early Cherry-Trees, which should be content with the allowance of seven foot and a half of distance each from the other, and so should serve to fill up the fifteen last Additional *Toufes* or *Fathoms* of Wall to the Southward.

As to the other *Toufes* or *Fathoms* of Wall, added to the extent of each *Exposition*, I shall not stand any more to specify what is to be done in them, from *Toufe* to *Toufe*, or from *Fathom* to *Fathom*, as I have done before, as well because my manner of disposing them is well enough understood by the preceding Dispositions, without any further need of troubling our selves, to set down any more such exact lists of all particulars, as also because we are now entering into great Gardens, where I think it sufficient only, and simply to set down the order of the Trees to be observed in planting fifteen additional *Toufes* or *Fathoms* to each *Exposition*. Those Persons, whose Garden Walls are not perhaps augmented full out to fifteen *Toufes*, or *Fathoms* in each *Exposition*, knowing the distance

we allow to the Trees, and seeing the order of precedence. I assign for entire augmentations, will know well enough how to confine themselves to the number which their Ground will permit them to plant; for if for Example, any Gentleman has but sixty Toises or Fathoms of Wall, he will not need for many Trees as if he had seventy five.

This is then the Order which I would have followed in the choice of the Trees that are to stock an Eastern Wall Plantation augmented with the addition of fifteen Toises or Fathoms of Wall, over and above the fixty before disposed of. Two Trees of the White Figs shall take up four Toises or Fathoms, one whereof shall be of the Long White fort; and the thirteen Remaining ones shall be for nine other Trees in this order, viz. a sixth Admirable Peach, an eighth Minion, a sixth Forward or Hasting Violet Peach, a sixth White Mauldin, a fifth Troy Peach-Tree, a fourth Violet Perdrigon Plum-Tree, a fifth Chevreuse Peach-Tree, and a fourth Nivette.

The fifteen additional Toises or Fathoms towards the West, for the making up the number of threecore and fifteen Toises or Fathoms, shall be for eleven Trees in this order, viz. a fourth Royal Peach-Tree, a fourth Apricock-Tree, a fourth Bourdin Peach-Tree, a second Purple Peach, a second Italian Peach, a second Persick, a seventh Admirable, two Boncretien, and two Bergamot Pear-Tree.

To Compleat the threecore and fifteen Northern Toises or Fathoms, I would add twelve Trees in this order, viz. an eighth and ninth Virginlee Pear-Tree, an eighth and ninth Butter Pear, a first, second and third Frank Royal, a fifth Verte Longue, or Long Green Pear, a first and a second St. Lequin, a fourth Dry Martin, and a fourth Bugie.

And thus for three hundred Toises or Fathoms length of Walling, allowing to each side about threecore and fifteen, we should have eight Fig-Trees, whereof one of the Long White fort, twelve Apricock-Trees, whereof two of the Forward fort, twelve Early or Hasting Cherry-Trees, fifteen foot of White Muscat, and three of Red Muscat Grapes, nine foot of Chassela's, and six Foot of Corinthian Grapes, fourteen Plum-Trees, a hundred and three Peach-Trees, and threecore and seven Pear-Tree. The fourteen Plum-Trees, are six Violet Perdrigon, three white Perdrigon, two St. Catharines, one Apricock Plum, one Roche Courbon, and one Mirabelle. The hundred and three Peach-Trees are three Forward or Avant Peaches, eight Troy peaches, two Red Alberges, six White Mauldins, one Red Mauldin, eight Minions, five Bourdins, one Rossane, four Italian Peaches, nine Chevreuses, ten Forward or Hasting Violet Peaches, four Persicks, two Bellegardes, thirteen Admirables, three Purple Peaches, five Latter Royal Peaches, four Latter Violet Peaches, six Nivettes, three Yellow Admirables, five Violet Brignons, or Nettarins, two White Andilly Peaches, and three Pavies, viz. The Hasting or Forward White one, the Hasting Rossane Pavia, and the Latter Red one.

The sixteen fixty Pear-Trees, are five Boncretiens, ten Bergamots, nine Butter Pears, nine Virginlees, four Ambretts, four Lefchafferies, two Winter Thorn Pears, two Mareuil Thorn Pears, four Dry Martins, eight Verte Longues, or Long Green Pears, four Bugies, three Orange-Green Pears, one Melting Pear of Brest, two St. Lequins, and three Frank Royals.

A Hundred and fourcore Toises or Fathoms length of Good Exposition, which comprehend, as I have always supposed, the Southern and Eastern Wall, which two together I almost esteem alike for all sorts of plantations, bating only a little quicker advance in Ripening Fruits which the South makes before the other, and especially in Early Cherries, and in Muscat or Musk Grapes, which commonly ripen better towards the South, than towards the East. I say, a hundred and fourcore Toises or Fathoms extent of Walling, make me with there might be some Little particular Gardens, formed within it to accompany a Great one.

For in Earnest, a Kitching Garden is Large when it is of threecore and ten, or fourcore Toises or Fathoms extent on one side, and of fifty or threecore on another, and still more spacious, if all its four sides be of about an Equal length, so that with one great one, (which I hold always necessary) some Little middling Gardens of about twenty, or twenty five Toises or Fathoms extent, on one side, and about fourteen, fifteen or sixteen, on the other, seem to me very desirable and convenient, as well to please the Eyes which delight in such variety, as for the better accommodating the Fruits, and raising the greater abundance of them; the Shelter of the Walls which is so favourable for Fruits, being of much better influence in Little Gardens, than in great ones; And besides it seems very useful to have these Little Gardens, to place apart in each of them, a particular sort of Fruit.

For Example, 'tis good to have one Little Garden, in which the two good Expositions, that of the South and East, may, and that of the West too, may be for Figs; another where may be all the sorts of Good Plums; another wherein may be placed all the small sorts

sorts of Peaches; another, where may be all the Pavies we can have; another for all Red Fruits; and another for all the Hasting or Forward Pears, &c. whilst the great Garden is designed for the producing an abundance of Large Peaches in its Eastern and Southern Expositions, and an abundance of Autumnal Pears, in that of its Western, and of Winter ones in that of its Northern Quarter.

Let us now proceed to furnish our hundred and fourcore Toises or Fathoms of Good Exposition; that is, let us add to the hundred and fifty already stocked, the thirty which which we last augmented them, and supposing first fifteen of them to be towards the South, let us place there two good Fig-trees more, and nine Hasting, or Forward, or Summer-Pears, viz. six little Muscat Pear-trees, and six of Cuisse-Madames, or Lady Thighs.

The fifteen towards the East, shall be for eleven Trees in this order, viz. for a fourth and fifth Forward or Avant peach, a second Rossane, a ninth Troy peach, a ninth Minion, a seventh White Mauldin, an eleventh Hasting or Forward Violet peach, a second Red Mauldin, a fifth Italian peach, a fourth Purple peach, and a fourth Common Apricock-Tree.

The fifteen towards the West, to make up the number of fourcore and ten, shall be for eleven Trees, viz. a fourth Troy peach, a fifth Chevreuse, a first and second Yellow Alberges, a second White Mirabelle Plum, an eighth Admirable peach, and a third Boncretien and a second Bergamot Pear.

The fifteen Additional Toises or Fathoms towards the North will not be ill bestowed, partly in thirty Foot of Raspberry Bushes, which grow fairer there, and last longer than in the open air; and partly in six Foot of Bourdelais Grapes, which will shoot up above them, and garnish the upper part of the Wall, and for that purpose, must be equally distributed among the Raspberry-Bushes.

The Bourdelais is a sort of large white longish Grape, that grows in great and large Clusters, and almost never comes to Maturity, and consequently is good only to make Sweet-meats, or simply to make Verjuice with, when there is occasion; its Leaves too are extremely used to garnish Dishes in the Month of October.

And so in three hundred and threecore Toises or Fathoms of Walling thus planted, we should have ten White Fig-trees, thirteen Apricock-trees, of which, two of the forward fort, twelve Early or Hasting Cherry trees, fifteen foot of White, and three of Red Muscat, or Musk Grapes, nine foot of Chassela's, and six of Corinthian Grapes, fourcore and one Pear-trees, fifteen Plum-trees, and a hundred and two Peach-trees.

The hundred and two Peach-trees are five Forward, or Avant-Peaches, ten Troy Peaches, two Red Alberges, two Yellow Alberges, seven Red Mauldins, seven White Mauldins, nine Minions, five Bourdins, five Italian peaches, ten Chevreuses, eleven Hasting or Forward Violet Peaches, four Persicks, two Bellegardes, fourteen Admirables, four Purple Peaches, five Latter Royal Peaches, four Latter Violet Peaches, six Nivettes, three Yellow Admirables, five Violet Brignons or Nettarins, one White Andilly Peach, and three Pavies, viz. mirabelle, five Violet Brignons or Nettarins, one White Andilly Peach, and three Pavies, viz. one White and Yellow Forward one, and one Latter Red one. The fifteen Plum-trees are one White and Yellow Forward one, and one Latter Red one. The fifteen Plum-trees are one White Violet Perdrigon, three White Perdrigons, two St. Catharines, two Mirabelles, one Apricock Plum, and one Roche Courbon. The eighty one Pear-trees are eight Boncretien, twelve Bergamots, six Little Muscats or Musk pears, three Cuisse Madames or Lady Thighs, nine Butter Pears, nine Virginlees, four Ambretts, four Lefchafferies, two Winter Thorn pears, two Mareuil Thorn pears, four Dry Martins, five Verte longues, or Long green pears, four Bugie's, three Orange-green pears, one Melting Pear of Brest, two St. Lequins, and three Frank-Royals. Four hundred and twenty Toises or Fathoms of Walling, viz. two hundred and ten of Good Exposition to the South and East, a hundred and five of the Middling sort to the West, and a hundred and five of Bad to the North, should be filled up as follows.

The thirty Additional Toises or Fathoms to make up the two hundred and ten of Good Exposition, which are parted into two equal portions of about 105 for the South, and 105 for the East-side, should have on the South-side, eleven Trees in this Order, viz. two Forward Apricock trees, two White Forward or Hasting Pavies, one Yellow Forward Pavia, two Ward Apricock trees, two White Forward or Hasting Pavies, and two Latter Violet Peaches. And on the Red Latter Pavia, to make up the dozen, they will be content with 9 Foot of East, two White Fig-trees, to make up the dozen, they will be content with 9 Foot of East, two White Fig-trees, to make up the dozen, they will be content with 9 Foot of East, viz. a second White Andilly peach, a first Empré's plum, a second Roche-Courbon, a second Apricock plum, a third St. Catharine, a fifth Apricock-tree, a tenth Minion peach, an eighth Admirable, and an eighth forward Violet peach.

The Empré's Plum is a sort of Latter Violet Perdrigon, which ripens not till October. The Empré's Plum. W.L.S. and is very good. The fifteen Additional Toises or Fathoms to the West, to make up the proportion of a hundred and five, shall have eleven Trees in this Order, viz. a first and second Robine Pear, a first and second Lefchafferie, a first and second Ambrett, a first and second

second Winter Thorn Pear, a first and second Mareuil Thorn pear, and a first Russet. And the fifteen added to the North, to make up a hundred and five, shall have twelve Trees in this Order, viz. a first and second Lanfic Pear, a first great Blanquet, or White Pear, a first Espargne or Reserve pear, a first Robine, a first Cassole, a Doyenne or Dean Pear, a fourth Apricock-tree, a first and second Double Flower'd Pear, and a first Angober.

So that the four hundred and twenty Toises or Fathoms of Walling, which we have last filled up, would at this Rate be stocked with 12 White Fig-trees, 17 Apricock-trees, of which 4 of the Forward sort, 12 Early Cherry-trees, 15 Foot of White, and 3 of Red Muscat, or Musk Grapes, 9 of Chaffels, and 6 of Corinthian Grapes, 19 Plum-trees, 124 Peach-trees, 10 Pavies, 102 Pear-trees, 24 Foot of Bourdelais Grapes, and 21 Foot of Raspberry Bushes.

The 19 Plum-trees are 6 Violets, and 3 White Perdrigons, 3 St. Catharines, 2 White Mirabelles, 2 Apricock-plums, 2 Roche-Courbons, and 1 Empress.

The 124 Peach-trees are 5 Forward or Avant Peaches, 10 Troy Peaches, 2 Red, and 2 Yellow Alberges, 2 Koffanes, 7 White, and 2 Red Maudlins, 10 Minions, 5 Bourdins, 5 Italian peaches, 10 Chevreuses, 12 Hasting or Forward Violet peaches, 4 Perficks, 2 Bellgades, 15 Admirables, 4 Purple peaches, 5 Latter Royal peaches, 6 Latter Violet peaches, 6 Nivettes, 3 Yellow Admirables, 5 Violet Brugnons or Netlarins, and 2 White Andilly Peaches.

The 10 Pavies are 2 Forward or Hasting White Pavies, 1 Red Alberge Pavia, 2 Yellow Forward Pavies, 3 Red Latter Pavies, and 2 Latter yellow ones.

The 102 Pear-trees are 8 Boncretiens, 12 Bergamots, 6 Little Muscats or Musk pears, 3 Cuisse Madames or Lady Thighs, 3 Robines, 6 Lefchasseries, 6 Ambrets, 4 Winter Thorn pears, 4 Mareuil Thorn Pears, 4 Dry Marvins, 4 Verte Longues, or Long Green pears, 4 Bugies, 3 Orange-Green pears, 1 Melting pear of Brest, 2 St. Lezins, 3 Frank Royals, 2 Lanfics, 1 Great Blanquet or White pear, 1 Espargne, or Reserve pear, 1 Cassole, 1 Doyenne, or Dean pear, 1 Angober, 2 Double Flowers, 1 Russet, 9 Butter pears, and 9 Virgoules.

Finding my self stocked with a sufficient number of Peach-Trees for the proportion of four hundred and twenty Toises or Fathoms extent of Fruit-Walls, and but with too few Pear-trees, for to great a proportion of Walling, I thought it convenient to augment the Stone-Fruits less, and the Kernel-Fruits more. And therefore I have filled up one whole Wall-plantation, of fifteen Toises or Fathoms in length, all with Pear-trees only, of which four Fathoms or Toises are planted with Summer pears, and the rest with Winter ones. I have likewise multiplied towards the North, some Fruits of Summer, Autumn and Winter, such as I know by certain Experience, to thrive pretty well in that Exposition, though less favourable than the rest.

For four hundred and fourscore Toises or Fathoms of Fruit-Walling, viz. at the rate of a hundred and twenty to each Exposition, I think the fifteen new ones last added towards the South, would best be planted all with Grapes, and therefore we will fill them up with 15 foot of White, and 3 of Red Muscat, 9 of Chaffels, and 6 of Corinthian Grapes.

I think likewise, that the fifteen Additional ones towards the East, require two Fig-trees more, a fifth and a sixth Violet Perdrigon plum, a third White Perdrigon, with six Peach-trees, which shall be a sixth and seventh Chevreuse, a sixth Forward or Avant peach, an eleventh and twelfth Troy peach, and an eighth White Maudlin.

The fifteen added to the Western Side, to make up a hundred and twenty, require a fifth and sixth Bourdin peach, a third Violet Brugnons or Netlarins, one Italian peach, one Perfick, one Purple peach, one Latter Royal peach, two Winter Boncretien pears, and two Autumnal Bergamots.

And in the Northern fifteen, that compleat the hundred and twenty Toises or Fathoms, that belong to the share of that Exposition, we will place 12 Pear-trees, viz. a 10th, 11th, 12th, and 13th Virgoules, a 4th and 5th Frank Royal, and a 2d and 3d Angober.

Four hundred and fourscore Toises or Fathoms of Fruit-Walling then, in all the four several Expositions, will in the whole contain, 14 Fig-trees, 17 Apricock-trees, whereof 4 of the Forward sort, 12 Early Cherry-trees, thirty foot of White, and six of Red Muscat Grapes, 18 foot of Chaffels, and 12 of Corinthian Grapes, 22 Plum-trees, 137 Peach-trees, 10 Pavies, 116 Pear-trees, 30 foot of Raspberry Bushes, and six foot of Bourdelais or Virgoules Grapes, to garnish the upper part of the Wall.

The 22 Plum-trees are 8 Violet Perdrigons, 4 White Perdrigons, 3 St. Catharines, 2 White Mirabelles, 2 Apricock-plums, 2 Roche-Courbons, and 1 Empress.

The 137 Peach-trees are 6 Forward or Avant Peaches, 12 Troy peaches, 2 Red Alberges, 2 Yellow Alberges, 2 Koffanes, 8 White, and 2 Red Maudlins, 10 Minions, 7 Bourdins, 6 Italian Peaches, 12 Chevreuses, 12 Forward or Hasting Violet Peaches, 5 Perficks, 2 Belle-

2 Bellgades, 15 Admirables, 5 Purple Peaches, 6 Latter Royal Peaches, 6 Latter Violet Peaches, 6 Nivettes, 3 Yellow Admirables, 6 Violet Brugnons, or Netlarins, and 2 White Andilly. The 10 Pavies are 2 White Forward Pavies, 1 Red Alberge Pavia, 2 Yellow Forward Pavies, 3 Red Latter Pavies, and 2 Yellow Latter Pavies.

The 118 Pear-Trees are 10 Boncretiens, 14 Bergamots, 6 Little Muscats, or Musk Pears, 3 Cuisse Madames, or Lady Thighs, 3 Robines, 6 Lefchasseries, 6 Ambrets, 4 Winter Thorn Pears, 4 Mareuil Thorn Pears, 4 Dry Marvins, 4 Verte Longues, or Long Green Pears, 1 Sugar green Pear, 4 Bugies, 1 Orange-Green Pears, 1 Melting Pear of Brest, 2 St. Lezins, 5 Frank Royals, 2 Lanfics, 3 Great Blanquet, or White Pear, 1 Espargne, or Reserve Pear, 1 Cassole, 1 Doyenne, or Dean Pear, 3 Angobers, 2 Double Flowers, 1 Russet, 13 Butter Pears, and 13 Virgoules.

And here I think is the proper place to tell you, that when I have seen what number of Trees of any one certain kind, as of Peach-Trees, Pear-Trees, &c. I am to plant in any certain Wall-Plantation; as for example, how many Violets, or Admirable Peach-Trees, how many Boncretien, or Bergamot Pear-Trees, &c. I design for my East, South, West, or North Expositions, I place together, and all one after another, first, all the Trees of one sort, as all the Violet Peaches, and in the second place, all the Trees of another kind, likewise one after another, as all the Admirables &c. without mixing any of the kinds one with another: As finding that to make better both for the commodity of Gathering the Fruit, and for preventing any loss of it.

And I never made any other intermixture, as I have already told you, but of Apricock-Trees among Peach-Trees, as I likewise use to do of Plum-Trees among Peach-Trees, unless I have a separate Garden big enough to hold all the Plum-Trees the extent of my Ground requires, for then I reduce them all into that one place; The same thing I do with Fig-Trees, and when not.

For five hundred and forty Toises or Fathoms length of Fruit Walling, allowing about a hundred and thirty five to each Exposition, methinks, to fill up our additional fifteen Toises or Fathoms of Wall towards the South, it would not be amiss for certain curious Persons to introduce here eight foot of Early or Forward Grapes, which will take up the room of two Trees, 2 Azeroll or Garden Hawthorn, or White Thorn-Trees, twenty foot of White Muscat Grapes, and ten foot of Chaffels; or if they please, rather ten foot of Cionaut Grapes. As for the early Cherry-Trees, seven foot will afford room enough for them.

The Azeroll, or Garden Haw, is a kind of White Thorn, which produces a Fruit like both in colour and shape, to that of the Common White Thorn, but it is twice as big, and its Eye or Crown is great, and very open; its stalk is short, small, and set hollow into the Fruit, which is yellow, and Doughy, having two great fones within it, which is the reason the Fruit has but little Pulp: Its taste is sharp and fowrish, which pleases certain persons, and therefore when we have five or six hundred Toises or Fathoms length of Wall, it is not amiss to plant a couple of stocks of them. It shoots forth a great many boughs, and consequently, its Tree is fair enough; Its leaf is a little Larger than that of the Common White Thorn, but it is nothing nigh so fruitful as that.

The Early or Forward Grape, is a sort of Black Morillon, which takes colour very early, which makes it appear ripe long before it is; Its skin is very tough, and when it is ripe, the Grape is very sweet. They appear commonly at the very beginning of July. It is described. It ripens in the beginning of September. It is very curious to see them for Curiosity.

As for the Cionaut Grapes, I leave the Curious at their own Liberty to prefer it here before the Chaffels, if they please. The Fruit of both of them is very like in all things, as colour, bigness, and taste; only the leaf of the Cionaut Vine, is dented all about the edges like Paisley, and besides, it seems to bear more Fruit than the Chaffels, but yet I like the Chaffels better, and nothing but pure curiosity can induce me to plant some feet of it in great Gardens, the fifteen Toises or Fathoms added towards the East, to make up its proportion of a hundred thirty five, shall receive two Fig-Trees, an eleventh, twelfth, and thirteenth Minion Peach, a ninth and tenth White Maudlin, a thirteenth and fourteenth Hasting or Forward Violet Peach, and a ninth and tenth Admirable.

The fifteen Western ones to make up the same Quota of a hundred thirty five, shall receive a first and second Butter Pear, a first and second Virgoules, a ninth, tenth, eleventh and twelfth Boncretien, and an eighth, ninth, tenth, and eleventh Bergamot; And the fifteen added to the North side, to make up the like number of a hundred thirty five, shall be taken up with a sixth, seventh and eighth Frank Royal, a fourth, fifth and sixth Angober,

a first, second, third, and fourth *Besidery*, and a third and fourth *Double Flower Pear-Tree*; Our five hundred and forty *Totes* or *Fathoms* then of *Fruit Wall*, will at this rate, be stocked with sixteen *White Fig-Trees*, of which two of the *Long sort*, seventeen *Apricock-Trees*, of which four of the *Forward sort*, twelve *Early Cherry-Trees*, and fifty foot of *White*, and six of *Red Muscat* or *Musk Grapes*, nineteen of *White Chassela's*, ten of *Cionin*, twelve of *Corinthian Grapes*, eight foot of *Early or Forward Grapes*, twenty two *Plum-Trees*, one hundred forty six *Peach-Trees*, ten *Pavies*, two *Azerolls*, or *Garden Hawth*, or *Haw Thorn-Trees*, and a hundred forty two *Pear-Trees*, the twenty two *Plum-Trees* are entirely the same with those named in the preceding Distribution of the four hundred and eighty *Totes* or *Fathoms*.

The hundred forty six *Peach-Trees* are six *Forward*, or *Avant Peaches*, twelve *Troy Peaches*, two *Red* and two *Yellow Alberges*, two *Rossane's*, ten *White Mauldins*, and two *Red*, thirteen *Minions*, seven *Bourdin's*, six *Italian Peaches*, twelve *Chevreuil's*, fourteen *Hasting*, or *Forward Violet Peaches*, five *Perficks*, two *Bellegardes*, seventeen *Admirables*, five *Purple Peaches*, six *Latter Royal Peaches*, six *Nivette's*, three *Yellow Admirables*, six *Violet Brugnons*, or *Nellarins*, and two *White Andilly Peaches*.

The ten *Pavies* are the same as in the precedent Distribution.

The hundred forty two *Pear-Trees* are fourteen *Boncretiens*, eighteen *Bergamots*, six *Little Muscats*, or *Musk Pears*, three *Cuisse Madames*, or *Lady Thighs*, three *Robines*, six *Lechasseries*, six *Ambretts*, four *Winter Thorn Pears*, four *Mareuil Thorn Pears*, four *Dry Martins*, four *Verte Longues*, or *Long Green Pears*, 1 *Sugar Green Pear*, 4 *Bugies*, 3 *Orange Green Pears*, one *Melting Pear* of *Brest*, two *St. Lezins*, eight *Frank Royals*, four *Besideries*, six *Angobers*, four *Double Flowers*, two *Lanquets*, one *Great Blanquet*, or *White Pear*, one *Epagne*, or *Reverre Pear*, one *Casslet*, one *Doyenne*, or *Dean Pear*, one *Rufflet*, fifteen *Butter Pears*, and fifteen *Virginlets*.

For six hundred *Totes* or *Fathoms* of Walling, allowing about a hundred and fifty to each *Exposition*, I would place in the fifteen augmented towards the *South*, a seventh, eighth, ninth and tenth *Latter Violet Peach*, a seventh and eighth *Nivette*, a fourth, fifth and sixth *Yellow Admirable*, a fourth *Violet Brignon*, or *Nellarin*, and a third *Avant or Forward Peach*. For the fifteen augmented towards the *East*, I would assign two *Fig-Trees*, a fourth *Avant*, or *Forward Peach*, a tenth *Troy Peach*, a third *Rossane*, an eleventh and twelfth *White Mauldin* or *Early Hasting Violet Peach*, a fourteenth and fifteenth *Minion*, and a first *White Purple Cherry Peach*.

There are two sorts of *Cherry Peaches*, the one with a *White*, and the other with a *Yellow Pulp*; They are both about the Bigness of the *Troy Peaches*, both have a smooth skin, and are both very round, and as it were flat, and sinking: Both of them are extremely coloured with *Red* on the outside, from whence they had the names they bear; but one has a *Yellow Pulp*, and of a Doughy substance, and consequently is little worth; and the other has a white and firm Pulp, and therefore is much better; which last when it can attain to its due ripeness, has a pretty good and vinous taste, and an indifferent tender Pulp. The *Earwigs* which are little longish and brown insects commit cruel hostilities upon them, as well as upon the *Forward*, or *Avant Peaches*, and the *Troy Peaches*.

For the fifteen Superadded to the *Western side*, we will order a ninth *Admirable Peach*, a sixth and seventh *Chevreuil's*, a fifth and sixth *Troy Peach*, a sixth *Latter Royal Peach*, a fifth and sixth *Common Apricock-Tree*, a third *White*, and a second *Violet Perdrigon Plum*, and one *Royal Plum-Tree*. And for the fifteen augmented towards the *North*, to make up its Quota of a hundred and fifty, we will provide a second and third *Robine*, a second *Melting Pear* of *Brest*, a second *Epagne*, or *Reverre Pear*, a second *Doyenne*, or *Dean Pear*, a second *Casslet*, a second *Blanquet*, or *White Pear*, a third and fourth *St. Lezin*, a first and second *Cuisse Madame*, or *Lady Thighs*, and a fifth *Dry Martin*.

And at this rate, to garnish six hundred *Totes* or *Fathoms* extent of *Fruit Walling*, allowing about an hundred and fifty *Totes* or *Fathoms* to each *Exposition*, we should have in all, eighteen *White Fig-Trees*, whereof two of the *Long sort*, nineteen *Apricock-Trees*, whereof four of the *Forward sort*, twelve *Early or Hasting Cherry-Trees*, one hundred twenty eight foot of *Grapes*, viz. Fifty of *White*, and six of *Red Muscat*, twenty eight of *Chassela's*, twelve of *Corinthian*, and eight of *Forward*, or *Early Grapes*, twenty four of *White Bourdelais*, or *Verjuice Grapes*; twenty five *Plum-Trees*, 173 *Peach-Trees*, ten *Pavies*, two *Azerol* or *Garden Hawth-Trees*, and a hundred fifty one *Pear-Trees*.

The twenty five *Plum-Trees*, are nine *Violets*, five *White Perdrigons*, three *St. Catharins*, two *White Marabelles*, two *Apricock Plums*, two *Reche Combons*, one *Empress*, and one *Plum Royal*.

The hundred seventy three *Peach-Trees*, are eight *Forward*, or *Avant Peaches*, fifteen

Troy

*Troy Peaches*, two *Red*, and two *Yellow Alberges*, three *Rossane's*, twelve *White*, and two *Red Mauldins*, fifteen *Minions*, seven *Bourdin's*, six *Italian Peaches*, fourteen *Chevreuil's*, fifteen *Forward or Hasting Violet Peaches*, five *Perficks*, two *Bellegardes*, eighteen *Admirables*, five *Purple Peaches*, seven *Latter Royal Peaches*, ten *Latter Violet Peaches*, eight *Nivette's*, six *Yellow Admirables*, seven *Violet Brugnons*, or *Nellarins*, two *White Andilly's*, and one *White Pulp Cherry Peach*, the ten *Pavies*, are two *White Hasting*, or *Forward Peaches*, one *Red Alberge Pavie*, two *Forward*, or *Hasting Rossane Pavies*, and two *Latter Yellow ones*. The hundred fifty one *Pear-Trees*, are fourteen *Boncretiens*, eighteen *Bergamots*, six *Little Muscats*, or *Musk Pears*, five *Cuisse Madames*, or *Lady Thighs*, five *Robines*, six *Lechasseries*, six *Ambretts*, four *Winter Thorn Pears*, four *Mareuil Thorn Pears*, five *Dry Martins*, four *Verte Longues*, or *Long Green Pears*, one *Sugar Green Pear*, four *Bugies*, three *Orange Green Pears*, two *Melting Brest Pears*, four *St. Lezins*, six *Frank Royals*, five *Besideries*, six *Angobers*, four *Double Flowers*, two *Lanquets*, two *Great Blanquets*, or *White Pears*, two *Epagne's* or *Reverre Pears*, two *Casslets*, two *Doyenne's*, or *Dean Pears*, one *Rufflet*, fourteen *Butter Pears*, and fourteen *Virginlets*.

Metinks this distribution of six hundred *Totes* or *Fathoms* of *Fruit Wall*, might be sufficient to Direct People how to stock a greater quantity to the best advantage, though it were of a thousand or twelve hundred *Totes* or *Fathoms*, since having from the very beginning, disposed of our Walls, by adding fifteen and fifteen *Totes* or *Fathoms* at a time to each *Exposition*, and set down exactly what enters first, into the first fifteen, and afterward into 30, 45, 60, 75, 90, 105, 120, 135, and 150. Those Gentlemen, which for Example, instead of the 150, in one of the four *Expositions*, for the garnishing of which, we last gave directions, should have 165, 180, 185, or 210 *Totes* or *Fathoms* of Wall, &c. might make use of what I have set down, to fill up the additional *Totes* or *Fathoms* of the same *Exposition*; And therefore without pursuing any further, this tedious long list and enumeration of each single *Tree*, I might very well finish here, and justly hope that some of them would be satisfied with me, and the rest would not blame me for having insisted too long upon this unpleasing work.

However, the more to facilitate all things yet, I will tell you, that for six hundred and sixty *Totes* or *Fathoms* of *Fruit Walling*, whose *Southern side* contains a hundred and sixty five, I would place in the fifteen *Totes* or *Fathoms* last added, eleven *Trees*, viz. four *Peach-Trees*, that is, two *Minions*, and two *White Mauldins*, one *Forward Apricock-Tree*, and six *Early or Hasting Cherry-Trees*.

To an *Eastern Wall* of the same extent, I would super-add eleven other *Trees*, viz. two *Fig-Trees*, and nine good *Peach-Trees*, which should be three *Chevreuil's*, three *Bourdin's*, and three *Perficks*.

To a *Western one* augmented with the like number of fifteen *Totes* or *Fathoms*, I would order eleven *Peach-Trees*, which should be three *Forward*, or *Hasting Violet Peaches*, two *Purple Peaches*, two *Italian Peaches*, one *Rossane*, one *Red Alberge*, one *Yellow Alberge*, and one *Nivette*.

And to a like supernumerary Quantity, added to the *Northern side*, to make up the like proportion of *Totes* or *Fathoms*, I would assign twelve *Pear-Trees*, which should be two *Butter Pears*, two *Virginlets*, two *Bergamots*, two *Double Flowers*, two *Bug's*, and two *St. Lezins*.

And so in the extent of six hundred and threescore *Totes* or *Fathoms* of *Fruit Wall*, besides all the *Grapes*, the twenty five *Plum-Trees*, the ten *Pavies*, and the two *Azeroll*, or *Garden Hawthorn-Trees*, set down in our Distribution of the six hundred *Totes* or *Fathoms*, we should have eighteen *Forward*, or *Early Cherry-Trees*, twenty *Apricock-Trees*, of which five of the *Forward sort*, twenty *Fig-Trees*, one hundred ninety seven *Peach-Trees*, and a hundred sixty three *Pear-Trees*.

For seven hundred and twenty *Totes* or *Fathoms* of *Fruit Walling*, the *South side* of a hundred and eighty, should for its augmentation of fifteen *Totes* or *Fathoms*, have an addition of eight *Boncretien Pears*, and four *Cuisse Bergamot Pear-Trees*. We should have some well coloured *Boncretien Pears*, and some *Bergamots* a little earlier ripe than others; for which effect, the *Southern Exposition* is necessary: 'Tis true the *Tiger Balbs* put me in great apprehensions for these twelve *Pear-Trees*. But besides that I ought not to give occasion to any persons to blame me for having had no care to place honourably and advantageously, those two *Pears* which I so highly prize,

We will do what we can to defend them from all Enemies, and at last, if all our care and industry be without success, we will put *Stone-Fruit*, or *Fig-Trees*, or *Muscat Vines*, in place of *Pear-Trees*, that we may at least have this satisfaction, to have forgot nothing that may contribute towards the well discharging of our duty.

The

The East of a hundred and fourcore, for its Augmentation of fifteen Toises or Fathoms, should have eleven Trees, viz. three Violet Perdrigon Plums, one White Perdrigon, one White Mirabell, two Empresses, One Roche Courbon, two St. Catharines, and one Apricock Plum-Tree.

The West of a hundred and eighty, should have eleven Trees, four Admirables, two Latward Royals, two Bourdins, one Brugnons, or Nektarin, one Nivette, and one Roussels Pear-Tree.

The North of a hundred and eighty, should have for its Augmentation of fifteen Toises or Fathoms, eighteen foot of Rasp-berries, and sixteen foot of Goose-berries, and Currant-bushes, I allow 3 foot to the Goose-berries, and Currants, and only 2 to the Raspberries, and these Goose-berries or Currant, as well as the Raspberries will indeed yield their Fruit Later there, but yet it will be Larger, and amongst those Rasp-berries, and Goose-berries, or Currant bushes, we will put eight Standard-Trees that may serve to garnish the upper part of the Wall, to wit one Apricock-Tree, and seven such Pear-Trees as I shall here specify; two Dry Martin Pear-Trees, two Frank Royals, two Angobers and one Besidery.

So that in seven hundred and twenty Toises or Fathoms of Fruit Walling, besides all the Vines or Grapes, the ten Pavies, and the two Azaroll or Garden Haw-Trees mentioned in the distribution of the six hundred Toises or Fathoms, we shall have two hundred and seven Peach-Trees, a hundred and eighty three Pear-Trees, eighteen Forward, or Early Cherry-Trees, twenty one Apricock-Trees, of which five are Hasting, twenty White Fig-Trees, thirty six Plum-Trees, eighteen foot of Rasp-berries, and sixteen Dutch Goose-Berries, or Currant-bushes.

The two hundred and seven Peach-Trees shall be eight Forward Peaches, fifteen Troy Peaches, three Red Alberge's, four Rossine's, fourteen White Maudlins, two Red Maudlin, seventeen Mignons, twelve Bourdins, eight Italian Peaches, seven Chevreuses, eighteen Hasty Violet Peaches, eight Persick Peaches, two Bellegardes, twenty two Admirables, seven Purple Peaches, nine Latter Royals, ten Nivette Peaches, six Yellow Admirables, eight Violet Brugnons, or Nektarins, two White Andillies and one White Pulp Cherry Peach.

The a hundred eighty three Pear-Trees, should be twenty two Winter Boncretiens, twenty four Bergamots, six Little Muscats, five Cuisse Madames, or Lady Thighs, fifty Robins, six Lefchafferies, six Ambrets, four Winter Thorns, four Marcul Thorn Pears, seven Matinfers, or Dry Martins, four Verte Longues, or Long Green Pears, one Sugar Green Pear, six Bugies, three Orange-Green Pears, two Fondante de Brest, or Melting Brist Pears, six St. Lezins, eight Frank Royals, eight Angobers, six Double Flowers, six Besideries, two Lansacs, two Great Blanquets, two Espagnes or Reserve Pears, two Cassolers, two Doyennes, or Dean Pears, two Roussels, sixteen Butter Pears, and sixteen Virgoulee Pears.

The 36 Plum-Trees must be 12 Violet Perdrigons, 6 white Perdrigons, 5 St. Catharines, 3 White Mirabells, 3 Apricock Plums, and 3 Empresses, 3 Roche Courbons, and one Plum Royal.

To 780 Toises or Fathoms of Fruit-Wall, for the 15 of Augmentation of the South Exposition which make in all 195, I will allow 11 Trees, which shall be these; 2 Pau Peaches, 3 Bellegardes, and 6 Pavies, namely a 2d. and 3d. Little Pavia Alberge, a 3d. Hasty Pavia Rossine, a 3d. Hasty White Pavia and a 4th. Red backward Pavia Peach, and a 3d. Yellow Latter Pavia.

I here venture to add 2 Pau Peaches, to a great quantity of other Peaches, being assured that when they can fully ripen, they are pretty good, and of great increase, and at least they will be good in a wet sweet-meat.

For the 15 Toises or Fathoms, of Augmentation of the East Quarter, which make 390, we will put 11 Trees, viz. 2 Fig-Trees, 2 Troy Peaches, 1 White Pulp Cherry Peach, 2 Admirables, and 2 Hasty Violet Peaches.

For the 15 Toises or Fathoms, of the Augmentation of the West, which also make 195, we shall put 12 Trees, to wit, 2 Ambrets, 2 Lefchafferies, 2 Winter Thorns, 2 Thorn Marevills, 2 Little Muscats, for to have Fruit for a longer time, 1 Robine, and one Double Flower'd Peach Tree, only for the simple curiosity of its Flower or Blossom.

The 15 Toises Augmentation of the North, to make up the number of 195 Toises or Fathoms, shall be for twenty four foot of Bourdains, and 21 foot of Chassela's Grapes, as well to have the Service of their Leaves and Verjuice, as to be provided with Grapes that will keep very long.

For 840 Toises or Fathoms of Fruit-Walls, we will place to the Southern Exposition, which shall be composed of 210, 4 White Fig-Trees, 2 Little Muscats, 2 Robines, 2 Lady Thighs, and one Musqued Summer Boncretien.

The

The 15 Toises or Fathoms of Augmentation of that of the East, to make up 210, shall be for 11 Trees, viz. 3 Red Maudlins, 4 Minions, and 4 White Maudlins.

The 15 Toises to the West, to make the same quantity of 210, shall be for 11 Trees, viz. 6 Fig-Trees, 2 Avont Peaches, and 3 Troy Peaches.

I put 6 Fig-Trees to the West, not that I expect they will yield any second Figs, for it's but very seldom they can ripen there, unless there happen such a Summer, as that in 1676. But for the first Figs, they grow very fair there and ripen very well. I set them also sometimes towards the North, especially when I have a very Extraordinary quantity of Walling, and I draw assistance from them as well for the first Figs, which fail not to ripen there, as for the Layers of them, which grow fair there and in great abundance.

The 15 Toises to the North, will be for 12 Pear-Trees, viz. 2 Sugred Greens, 3 Mefse Johns, 2 Long Green Pears, 2 Lansacs, 2 Vine pears, and 1 Orange-Green pear.

So that 840 Toises or Fathoms of Wall-Trees, should contain 238 Peach-trees, 16 Pavies, 213 Pear-Trees, 2 Garden Haw, or Azaroll-Trees, 32 Fig-Trees, 47 Plum-Trees, 18 Early Cherry-Trees, 21 Apricock-Trees, of which 5 must be Hasting, 48 foot of Rasp-berries, 16 of Goose-berries and Currants, 174 foot of Grapes, of which there must be 50 foot of White Muschel, or Muscat Grapes, and 6 of Red, 50 foot of Chassela's, 12 of Corinthian, 8 of Early, or Forward Grapes, and 48 foot of Bourdains.

The 238 Peach-Trees, are 12 Forward Peaches, 28 Troy Peaches, 3 Yellow Alberges, 4 Rossans, 18 White Maudlins, 5 Red Maudlins, 21 Minions, 12 Bourdins, 8 Italian Peaches, 17 Chevreuses, 20 Forward Violets, 8 Persicks, 5 Bellegardes, 2 Pau Peaches, 24 Admirables, 7 Purples, 5 Latward Royals, 10 Latward Violets, 10 Nivettes, 6 Yellow Admirables, 8 Violet Brugnons or Nektarins, 2 White Andillies, 2 White pulp Cherries, and 1 Double Flower'd peach.

The 16 Pavies, are 3 White Hasting pavies, 3 Red Alberge pavies, 3 Rossane Hasting pavies, 4 Red Latward pavies, and 3 Yellow Latward pavies.

The 213 Pear-Trees are 22 Winter Boncretiens, 24 Bergamots, 10 Little Muscats, 7 Lady Thighs, 8 Robines, 8 Lefchafferies, 8 Ambrets, 6 Winter Thorns, 6 Marcul Thorns, 7 Dry Martins, 6 Long Greens, 3 Sugar Greens, 6 Bugies, 4 Orange-Greens, 2 Melting Brist pears, 6 St. Lezins, 3 Mefse Johns, 8 Frank Royals, 8 Angobers, 6 Double Flowers, 6 Besideries, 4 Lansacs, 2 Vine pears, 2 Large Blanquets, 2 Espagnes or Reserve pears, 2 Cassolers, 2 Doyennes or Dean pears, 2 Roussels, 16 Butter pears, and 16 Virgoulee pears.

The 36 plum-Trees, are the same specified in the distribution of the 720 Toises or Fathoms, above specified.

For 900 Toises or Fathoms of Wall, I will make into Sloped Banks the 15 Toises or Fathoms of Augmentation to the South, making in the whole 225, and will do the same if I find 240 Toises or Fathoms on the South, which is just the fourth part of 960 Toises or Fathoms of circumference, these Banks or Slopes are very useful and necessary for producing Early and Hasting Pears, Beams, and Hasting Artichocks, &c. And therefore there must be built little small counter Walls to support them; but this must be in some by-place, or in some Garden apart, for it will make a very disagreeable figure in a great Garden.

For the 15 Toises or Fathoms added to the East, and making 225, we shall put 11 Trees, viz. 5 Hasting Violets, 3 Chevreuses, 1 Nivette, 2 Minions, and one White Magdalen.

For the West, Augmented in the same manner, also 11 Trees, viz. 3 Bourdins, 3 Italian Peaches, 2 Persicks, 2 Purples, and 1 Violet Brignons or Nektarin.

For the 15 Toises or Fathoms to the North, Augmented to make up 225, we will plant 15 Toises or Fathoms, with all sorts of Goose-berries or Currants, as well Red as White, or Pearled, with 8 Standard-Trees, to wit 4 Virgoulee, 2 Butter Pears, and 2 Dry Martins.

For 960 Toises or Fathoms of Wall, I will raise into Slope-Bank to the 15 Toises or Fathoms of the South part, Augmented beyond the 225, as I have already hinted.

The 15 Fathoms or Toises to the East, which make 240, shall be for 11 Trees, viz. 3 Abricot-Trees, 1 Violet Perdrigon, 1 White Perdrigon, 1 St. Catharine, 1 Abricot Plum, 1 Roche Courbon, 1 Empress, 1 Minion, and 1 Plum Royal.

The 15 Fathoms or Toises of the West, shall be for 4 Admirables, 2 Violet Peaches, 3 Winter Boncretien Pears, and 2 Bergamots.

The 15 of the North making in the same manner, 140 Fathoms shall be for 12 Trees, viz. 6 Fig-Trees, 6 Magdalen Pears, 1 Abricot-Tree, and 3 Double Flower'd Peaches; Those 6 Fig-Trees of the North, may be to furnish us with Figs in the Interval that is betwixt the first and second Figs of other Expositions.



The 334 Peach-Trees are 15 Forward or Avant Peaches, 29 Way Peaches, 4 Red and 4 Yellow Alberges, 6 Rofanes, 24 White, and 6 Red Maudlins, 28 Minions, 17 Boudins, 13 Italian Peaches, 25 Chevreuses, 30 Hasting Violets, 12 Perficks, 6 Bellegardes, 2 Pau Peaches, 40 Admirables, 12 Purples, 12 Latter Royal Peaches, 14 Latter Violets, 13 Nivettes, 10 Yellow Admirables, 10 Violet Brugnons, or Nectarins, 2 White Andilli's, 10 White Pulp Cherry Peaches, and 10 Double Flowers.

The 16 Pavies are 3 White Hasting Pavies, 3 Red Alberges Pavies, 3 Hasting Rofane Pavies, 4 Latter Red Latter Pavies, and 3 Latter Yellow Pavies.

The 301 Pear-Trees, are 30 Winter Boncretiens, 35 Bergamots, of which 12 are Swisse, 10 Little Muscats, 9 Cuisse Madames, or Lady Thighs, 10 Robines, 10 Lechafferies, 10 Ambrets, 7 Winter Thorns, 7 Mareuil Thorns, 11 Dry Martins, 3 Verte Longues, or Long Green Pears, 3 Sucre Vertes or Sugar Greens, 6 Buge's, 4 Orange-Greens, 2 Endantes or Melting Pears of Brest, 6 St. Lezans, 3 Mefive Johns, 10 Frank Royals, 8 Angobers, 9 Double Flowers, 8 Besidieres, 7 Lansacs, 3 Vine Pears, 2 Great Blanquets, or White Pears, 2 Epargne or Reserve Pears, 4 Cassiolets, 2 Dean Pears or Doyennes, 6 Rufflets, 21 Butter Pears, 21 Virgoulets, 3 Maudlins, and 2 Musk'd Summer Boncretiens.

Of the 44 Fig-Trees there are 6 of the Long White sort.

The 54 Plum-Trees, are 13 Violet Perdrigons, 6 White Perdrigons, 6 St. Catharines, 4 White Mirabels, 4 Apricock Plums, 4 Roche Courbons, 4 Empresses, 1 Minion, 4 Imprials, 2 Cernay Perdrigons, 2 Cassellans, 2 Ivorts, and 2 Royal Plums.

Of the 29 Apricock-Trees there are 6 Hasting's, of the 70 Plants of Rasp berries, there are 20 of the White sort, of the 70 plants of Goose-berries and Currans, there are 34 of the Red Holland Currans, 8 of White Holland Goose-berries, 18 of Common Red Currans, and 6 of the Common Green Goose-berries, of the 211 Vine Plants, there are 8 of White Muscats, 12 of Red Muscats, 27 of White Corinths, 8 of Early Grapes, 36 of Bourdelais or Verjuice Grapes, 40 of Chaffels, and 10 of Cionats.

The 45 Fathoms of Sloped Banks are filled up thus, viz. 26 with Hasting Pees, 8 with Hasting Beans, and 9 with Hasting Artichocks.

And now since I have with my best skill and Judgment, performed my promised undertaking, in directing you how to plant to the best advantage, as far as the quantity of 1200 Toises or Fathoms of Wall of 9 foot high, with the choicest Wall-Trees, I think it not amiss for your better understanding of my design, to set down likewise here by themselves, all the several Trees there are assigned to every one of the four Expositions, that so among the great number of Fruits named in the whole, you may see at one view how I have dispos'd of every of them in particular; And this is also plainly shown from Article to Article containing a gradual Augmentation of 15 Fathoms or Toises to each Exposition, by which method, you may easily know for Example, how many of the 40 Admirable Peach-Trees, how many of the 30 Hasting Violets, how many of the 35 Bergamot Pear-Trees, &c. which we have made use of, I say how many Trees of each sort are placed to a Southern Exposition of 300 Fathoms, how many to an Eastern one of the same Extent, how many to a Western, and how many to a Northern Exposition, and the like of all other Fruits, whether Kernal Fruit, Stone Fruit, &c.

I have already declared my Judgment, that there is but a small difference to be made between the Southern and Eastern Exposition, except it be for raising of Hasting's, such as are Peas, Beans, or Artichocks, which we would plant in a Sloped Bank, and for Early Cherries, Early Grapes, Hasting Apricocks, &c. and particularly for Muscat Grapes, and Little Muscat Pears, which I would likewise advise you to place in a Southern Aspect; and the reason that oblig'd me to mix these two Expositions together, was because very often Gardens are so contrived, that one of these two Expositions is quite wanting in them, and therefore either of them that is found there, ought in that Garden to be made to supply the place of both the two. And indeed how many Gardens do we see that have but one great Wall towards the South, or one great Wall towards the East, with little or none at all towards the other quarters; But 'tis not the same thing as to the Expositions of the West, or North, very few persons ever being guilty of such ill contrivance, to have a Garden only furnish'd with Wall, towards those Aspects.

And therefore they which are accommodated only with a Southern Wall, may very well furnish it with all those Trees, I have assign'd for that and an Eastern one too, and in like manner those Gentlemen that have only the convenience of an Eastern Wall, since they cannot have all the advantage they might expect from a Southern Aspect, ought to content themselves, and make the best of their Eastern ones, by planting in it all the same things that are assign'd for both that, and a Southern one; for these two Expositions, as is well known,

known, are capable of receiving every thing that is fit to be planted in the other two; whereas the other two Expositions are not fit to be made use of for the most part of those things that require the Expositions of the East and South; and consequently, we ought not easily to hazard to plant towards the North or West, any Muscat Grapes, Hasting Cherries, Hasting Pees, Plums to eat Raw, &c.

I lay Plums to eat Raw; for good Plums as well as Good Grapes, should bring their Natural Sugar with them; which is a perfection that nothing but a thorough ripeness can give them, and such an accomplish'd Ripeness is not to be attained in a Northern Aspect, and whereas other Fruits as Peaches, Pears, &c. are capable of being better'd with Artificial Sugar, Prunes will admit of no seasoning.

I have one observation more to offer to those who have much Walling towards the South or East, and none towards the North, which is that they may very well forbear planting towards their South or East, many things which I have assign'd for a Northern Wall; as for Example, some Baking Pears, Bourdelais, or Verjuice Grapes, Goose-berries, Currans, Rasp-berries, &c. the places of the Southern Exposition, seeming to me too precious to be bestowed upon Fruits of so little value, and that thrive well enough without the assistance of any Walls, unless they know not how to choose any thing better wherewithal to fill up their Southern and Eastern Walls.

But such Gentlemen as are accommodated with both an Eastern and Southern Exposition, may divide into two parts those things which I have placed under the single head of a Good Exposition, and may proportion them equally or unequally according to the extent of their several Walls, only taking care to reserve for the Southern Aspect, those things which are chiefly valuable for their precocity, and early advance in Maturity.

## CHAP. XV.

### An Abridgment of the Fruits assigned to each Exposition.

TO the proportion of six hundred Toises or Fathoms of Walling, divided into a Southern and Eastern Exposition, we have assign'd 205 Peach-Trees, 16 Pavies, 36 Plum-Trees, 49 Pear-Trees, 18 Early Cherry-Trees, 154 foot or plants of Grapes, 45 Sloped Banks, 2 Azeroil or Garden Haw-Trees, and 22 Fig-Trees, whereof four of the Long foot.

The 205 Peach-Trees, are 13 Admirables, 9 Hasting Violets, 28 Minions, 13 Chevreuses, 9 Nivettes, 24 White Maudlins, 6 Red Maudlins, 5 Perficks, 9 Common Apricock-Trees, and 5 Hasting Apricocks, 5 Violet Brugnons, or Nectarins, 17 Troy Peaches, 5 Purples, 10 Yellow Admirables, 14 Latter Yellow Violets, 4 Boudins, 9 Forward or Avant Peaches, 4 Italian Peaches, 2 Pau Peaches, 2 Latter Royal Peaches, 2 White Andilli's, 5 Rofanes, and 3 Red Alberges.

The 36 Plum-Trees, are 10 Violet Perdrigons, 5 White Perdrigons, 6 St. Catharines, 4 Apricock Plums, 4 Empresses, 1 Mirabel, 1 Royal Plum, 1 Minion Plum, and 4 Roche Courbons.

The 16 Pavies, are 4 Pomponne Pavies, 4 White Hasting Pavies, 3 Rofane Pavies, 2 Yellow Latter Pavies, and 3 Red Alberges Pavies.

The 49 Pear-Trees, are 8 Little Muscats, 5 Cuisse Madames, or Lady Thighs, 15 Winter Boncretiens, 9 Bergamots, 2 Robines, 2 Musk'd Summer Boncretiens, 2 Rufflets, and Lansacs, 1 Ambret, 1 Winter Thorn, 1 Mareuil Thorn, 1 Lechafferie, 2 Butter Pears, and 18 Early Cherry-Trees.

The 154 foot of Grapes, are 78 foot of White Muscats, 12 of Red, 19 of Chaffels, 10 of Cionats, 17 of Corinths, and 8 of Early Grapes, 2 Azeroil or Garden Haw-Trees, 45 Fathoms of Bank, for Peas, Beans and Artichocks, all Hasting's.

To the 300 Fathoms of the West, 10 Fig-Trees, 7 common Apricocks, 123 Peach-Trees, 8 Plum-Trees, and 74 Pear-Trees.

The 123 Peach-Trees, are 21 Admirables, 12 Chevreuses, 7 Pourpres, 13 Boudins, 12 Troy Peaches, 6 Avant or Forward Peaches, 11 Hasting Violet Peaches, 9 Italian Peaches, 7 Perficks, 10 Latter Peach Royals, 4 Nivettes, 5 Violet Brugnons or Nectarins, 1 Rofane, 1 Red Alberges, 2 Yellow Alberges, and 2 Double Flower'd Peaches.

The 8 Plum-Trees are 2 Violet Perdrigons, 2 White Violet Peaches, 2 Mirabels, and 1 Plum Royal.

The 74 Pear-Trees, are 17 Winter Boncretiens, 15 Autumnal Bergamots, 5 Lechafferies, 5 Ambrets, 4 Winter Ibans, 5 Mareuil Thorns, 4 Rufflets, 2 Butter Pears, 4 Virgoulets,

goulees, 2 Little Muscats, 5 Robines, 2 Cassiolets, 2 Lady Thighs, 1 Langie and 1 Magdalen Pear.

To the North, consisting of 300 Fathoms, 178 Pear-Trees, 10 Prunes, 66 foot of Goose-berries and Currants, 6 Peach-Trees, 70 Rasp-berry Plants, 77 of Bourdelais's, 20 of Chassell's Grapes, and 7 Apricock-Trees.

The 178 Pear-Trees, are 17 Butter Pears, 8 Verte Longues or Long Green Pears, 4 Orange-Green Pears, 19 Virgoules, 11 Bergamots, 4 Ambrets, 4 Lefchafferies, 11 Dry Martins, 6 Bug's, 2 Winter Thorn Pears, 2 Mareuil Thorn Pears, 10 Frank Royals, 3 Sugar Green Pears, 6 St. Lexins, 4 Lanfacs, 2 Blanquets, or White Pears, 2 Epargnes, or Reserve Pears, 3 Robines, 2 Cassiolets, 2 Doyennes, or Dean Pears, 3 Vine Pears, 9 Double Flowers, 8 Angobers, 7 Besideries, 2 Cuisse Madames, or Lady Thighs, 3 Messire Johns, 2 Maudlin Pears, and 2 Melting Pears of Brest.

The 10 Plum-Trees are 4 Imperials, 2 Cernay Perdrigons, 2 Castellans, 2 Iverts, and 1 Mirabel.

The 6 Peach-Trees, are all of Admirables. In the 66 foot of Goose-berries and Currants, there are 34 of Red Dutch, 8 White Dutch, 18 of the Common sort, and six of the prickly ones.

Among the 70 of Rasp-berry Bishes, there are twenty of the White ones.

I have already explained above, of what consists the 66 foot of Goose-berries and Currants, placed towards the North, and the 211 foot of Grapes, which are placed partly to the South, and partly to the North, and likewise how the forty five Taisse or Fathoms of Bank are filled up, which are all placed to the South Wall.

And so there you have Fruit Walls garnished, as far as to the extent of 1200 Taisse or Fathoms, and that with Figs, Peaches, Plums, Pears, Early Cherries, Algerols, or Garden Haus, Grapes, Goose-berries and Currants, Rasp-berries, &c.

And you have Pear-Trees, and Apple-Trees both Dwarfs and Standards, planted to the number of 1200 for Dwarfs, and as many as you can desire for Standard-Trees: Let us now see how we can contrive a Plum, and a Cherry Garden, if the extent and Quality of our Ground will permit it.

Plums are a sort of Fruit that is pleasing enough to every Body, and Plum-Trees prosper well enough in all sorts of Ground, let it be dry and sandy, or moist and heathy. They every where produce very lightly Trees, both Dwarfs and Standards, and commonly flourish very much every where; But they are likewise very subject every where unfortunately to miscarry in their Blossoms, because there often happen Frosts in the Spring that destroy them, which is the cause that Plums are very often scarce. But however when they meet with a favourable March and April, they produce an unconceivable quantity of Fruit.

We have some certain kinds of them, whose Blossoms are much more tender and susceptible of the injuries of an unkind season, than others, as for Example, the Perdrigons, and particularly the Violet one; and therefore I would have none of them planted in the open air, especially in Countries that are inclining to cold, or on those sides that are a little more subject than the rest, to the insults of the Frosts; My self for that reason, as well as for the improving them to a greater perfection of goodness, taking care to plant them by Walls, as I have already told you.

Those sorts of Plums that are a little better able to defend themselves, are the Cernay Perdrigons, of which I make little account; and next them, all the sorts of Damask Plums, among which I most particularly value, the Red or Round Violet, the Great White, and the Latter Black Damask, the Queen Claudias, the Violet Imperial, the St. Catharine, the Apricock Plum, the White Mirabel, the Violet Diaper Plum, the Diapered Roche Courbon, the Royal Plum, the Minion Plum, the Brugnolle, the Empress, the Hagling or Forward Morin, and the Cerisette or Little Cherry Plum: All which sixteen sorts are very good Raw, and very good Dried or Preserved.

The Iverts, Castellans, Moyens or Pith Plums, St. Julians, Cloth of Gold Plums, and Green Damasks, are only for preserving. It were good to have of all these kinds, if we can, but if our Ground will not admit of the planting but of a small number, those sorts which I should prefer are they which follow.

For a Garden where there could be but one only Plum-Tree whether Dwarf or Standard, I would take for the first, a Round Violet Damask.

For a second, a Queen Claudia.

For a third, an Imperial.

For a fourth, a White Great Damask.

For a fifth, a Diaper Roche Courbon.

For

For a sixth, a Mirabel.

For a seventh, an Empress.

For an eighth, a Black Latter Damask.

For a ninth, a St. Catharine.

For a tenth, an Apricock Plum.

For an eleventh, a Royal Plum.

For a twelfth, a Minion Plum.

For a thirteenth, a Diaper Violet Plum.

For a fourteenth, a Gray Damask.

For a fifteenth, a Brugnolle Plum.

For a sixteenth, a Hagling or Forward Morin Plum.

For a seventeenth, a Cerisette, or Little Cherry Plum, because of it's Earliness.

For an eighteenth, a Cloth of Gold Plum.

For a nineteenth, a Castellan.

For a twentieth, an Ivert.

For a one and twentieth, a Cernay Perdrigon, because of its abundant increase, and of its being good in Composes, or wet sweat-meats.

For a twenty second, a Date Plum.

And I would double the twelve first three or four times over, before I would double the other ten, and would plant none of any other Kind, till I had at least once doubled the ten last; neither would I plant any but Standard-Trees of the St. Julian, and Black Damask Plums.

Thus Infinitely we might form a Plum Garden, of fourcore or a hundred Stocks of Trees; and that is a great deal, considering how little a while that Fruit lasts when it comes, and how troublesome it is when it takes up a great deal of Room to no purpose, unless as it often happens; for when they take, that number is enough to furnish us a sufficient abundance of Plums, to convert into both Prunes and Sweet-meats.

The number of the other sorts of Plums is very great, and they that have a mind to it, may stuff their Gardens with them, if they please, but at least they shall have no reason to blame me for counselling them to it.

About mid-June the Red Fruits begin to come in, and hold at least till the end of July. Among which I reckon Cherries, Griots, and Bigarros or Heart Cherries, to be the most principal; we may have Dwarf-Trees of them, but Standards are better. They are Fruits so well known every where, that they need no Description, I prize none of them so particularly as the Large Latter Cherries, which they call Monmorancys, and next them the Bigarros, or Heart Cherries, and in the third place the Griots or Agriots.

The Guignes or Guings, of which there are White, Red and Black, are indeed Early Ripe, but they are too fleshy and insipid, and are not much eaten by persons of any Quality. The Cherries which are called Forward Cherries, but are not the Early ones of all, or true Haglings, succeed the Guignes or Guings; They are fair enough to the eye, are long stalked, and of a sharpish, and a little bitterish taste; and therefore I value them but little, unless it be for the making of some of the first Composes, or wet Sweet-meats.

The truly good and fair Cherries, commonly called Preserving Cherries, are those of Monmorancy, some of them grow upon Trees that shoot out great and upright Branches, and they are the Largest sort of them, but that sort of Trees bear but few of them. They are otherwise called the Coulardy-cherry.

The right sort of Good Common Cherries, produces small branches, and bending downwards, and brings great store of Fruit, which is very Sweet, and pleasant to the taste; One and the same Tree bears both Long and short stalk'd ones; and 'tis chiefly of this sort we are to plant most Trees.

The Bigarros or Heart Cherry is a Fruit both firm and crackling, Longish and almost Square, but always very sweet and very agreeable. Its Tree shoots out thick Branches, and that are Luxuriant enough, and its Leaf is Longish.

The Griot or Agriot is a sort of Blackish Cherry, of a pretty firm consistence, and very sweet and excellent. It Blossoms mightily, but withall is very subject to miscarry in the Blossom. Its Tree produces a thick Dwarf-tree, with a top composed of Branches, keeping close and tight together, and its Leaf is broad and blackish, none of the kinds of Merises or common Black-cherries, deserve to be admitted into an Artificial Garden, being properly Forest-trees or Wildings, yet may they serve us at least for Stock to receive mon Black-cherries of the choice sorts of Cherries above named.

In

How to order a Plum, or Cherry Garden.

Sixteen choice Sorts of Plums good every way. Plums good only to Dry, Preserve, &c.

The Plums the Author most prefers, and their order of precedence.

Which only it be reared on Standard-Trees. A Plum Garden of 80, or 100 Trees affords Plums enough for all.

Guignes or Guings, their Character, The second Forward Cherry, Their Character, chiefly good for Early Composes, &c.

Monmorancy, Coulardy or Large preserving Cherries.

The best sort of Common Cherry described. The same Tree bears Long and Short Stalk'd Cherries.

The Bigarros described and commended. The Griot, or Agriot described.

Merises of common Black-cherries described.

In *Poiton* and the *Angoumois* Country, they call those *Guignes* or *Guings*, which we call *Cherries*, and those *Cherries* which we call *Merises*, and those *Guindos*, which we call *Griots*.

If I were to plant a dozen of these sorts of *Trees*, six of them should be of the *Latter* large *Cherries*, two *Bigarros*, two *Griots*, and two of the *Forward Cherries*, and if two dozen, there should be twelve of the latter sort, and four of each of the other kinds; if three dozen, then 18 of the latter, 7 *Bigarros*, 7 *Griots*, and but four of the *Forward* sort, and so on in greater Numbers. Perhaps I might be of the mind to plant a couple of pale red *Guignes* or *Guings*, if I had 4 dozen of *Cherry-Trees* to plant, and people seldom pass that number, unless it be with design to sell the Fruit.

Let us now prepare to plant some tall *Standard Mulberry-Trees*, *Apricock-Trees*, and *Almond-Trees*, and let us choose out for that some *By-place*, that may not spoil any thing to the prospect of our *Garden*, or else let us place them among other *Standard-Trees*, if we have planted an Orchard of *Tall Trees*, for 'tis good to have a few *Mulberries*, and we may plant them too in some *Back Courts*, if we please: one, two, three, or four at most, will be more than sufficient for all sorts of Persons.

As for *Apricock* and *Almond-Trees*, from two to twelve of either of them, seem to me to be a sufficient number to furnish all sorts of Gentlemen of what quality soever, with a reasonable quantity of those Fruits.

The *Apricocks* that grow on *Tall-Trees*, are much richer tasted than others, and *Almonds* are a necessary and agreeable Fruit, and especially in the Months of *July* and *August*, when they are eaten green. I counsel you particularly to choose those that are tender shell'd, and since they are a sort of *Trees* that in four or five years time, grow very tall, we must only take care in the Month of *February*, to plant some *Almonds* in the place where we would have *Trees* of them, and to thin their top Branches the first years, and they will soon yield us the Satisfaction we expected from them; for they hardly ever thrive, when they are planted from *Trees* ready grown, as those of other Fruits do.

Let us likewise provide some *Medlar Trees* for them that love them, but on condition they be not placed in *Parade*, or to open view, they being not a Fruit precious enough to deserve so noble a station, nor yet of which we need plant any great number of *Trees*, the number of People that love them being not so very considerable.

We must not forget too some dozens of *Quince-Trees*, that we may have a Provision of *Quinces* to preserve, and to see they be planted in some place we do not often visit; smell of the Fruit of that *Tree*, being none of the most delightful, and especially since we ought hardly to plant less than a dozen of them, it being my Opinion, that we ought either to have none at all of them in our *Gardens*, or at least to have a reasonable quantity. And a dozen, or two, or three, or four at most seem to me to be a very sufficient number of this sort of *Trees*.

Lastly, let us likewise remember to plant some few *Azeroll* or *Garden Haw Dwarf-Trees*, for such as shall not think two *Wall ones* of that kind enough; they take well enough in that manner, and especially in bringing a great quantity of Fruit, but the *Wall-trees* bring the biggest Fruit of any others of this sort. And this done, we may say, we have done all we possibly could, to enable us to stock well with choice Fruit-Trees the room which could be afforded them in all sorts of *Gardens*.

Let us now proceed to the choice of each *Tree* in particular.

## CHAP. XVI.

What good Conditions are required in each Fruit-Tree, to qualifie it to be chosen and prefer'd to some good place in a Fruit garden.

OUR *Garden* being formed; dunded, accommodated, divided, and in fine, quite ready for planting, and every Gentleman knowing what number of *Trees* he needs according to the bigness of his *Garden*, and having also resolved upon the choice of the kinds, and what proportion of each kind he is to plant, with respect to the quality of his *Ground*, and to the several Seasons of the Year. It is now our business to choose such Stocks of *Trees* that are fair, and so well qualified, as to deserve to be planted, because of the hopeful promises they make us of contenting our Expectations.

And I suppose here that we have to do with *Gard'ners* that are in reputation to be knowing exact and faithful; for otherwise we run great danger of being grossly deceived in

in the kinds of our Fruits, and especially of *Peach-trees*, because they all resemble one another so much, both in Leaf and Bark, excepting the *Toy-peacher*, *Forward*, or *Avant peacher*, and the *White Mauldin*, which are distinguished by some more visible differences, for which reason I would advise no Body to take any *Trees* of suspicious or unknown *Gard'ners*, or that are of ill repute, how cheap a bargain soever they may offer them, such an error as that, being of too great a consequence to be ventured on at what rate soever.

*Tree* Stocks then are to be chosen, either whilst they are yet growing in the *Nursery-Gardens*, or after they are pulled up, and brought from thence. In both Cases we must consider first, the figure of each *Tree*. Secondly, its bigness, or thickness. Thirdly, in what manner they are fashioned, and composed, and if the *Trees* be already pulled up, we must take special notice of their *Roots*, and of the *Bark*, both of their Bodies and Branches.

## CHAP. XVII.

How to chose Trees as they stand in the Nursery-Gardens.

IF we choose our *Trees* in the *Nursery-Gardens*, which 'twere always to be wished, we could, and that about *Mid-September*, to mark out the *Trees* we choose and pretend to carry off, though that be not always feasible, because of the too great distance sometimes of the places where the choice *Nurseries* are, yet if we can go to the places, we must only fix upon those *Trees* that have shot vigorously that year, and that appear found both in their Leaves, and at the end of their young shoots, and by their smooth and shining *Bark*, so that if any *Trees* have no shoots of that years growth, but what are very feeble, or perhaps have none at all, if any before the Season for the fall of the Leaf, have all their Leaves lesser, and more starveling than they should be, and the extremity of their young shoots, Black and mortified, or their *Bark* rough and wrinkled, and full of Mofs; and if *Pear-Trees*, *Apple-Trees*, or *Plum-Trees*, they be *Canker'd*, or if they be stone Fruit, and found to have *Gum*, either about their Body or *Roots*, all these are so many Marks of *Trees* which we are to reject, to which we shall subjoin some other particular Marks yet of very great importance.

*Peach-Trees* that have been Grafted above a year, or above two, without being stript below, are worth nothing, they being hardly vigorous enough to sprout above the old Branches; the same judgment is to be made of those which are above three Inches, or not so much as between one and two Inches thick below, and of those that are Grafted upon old *Almond Stocks*, and are about four or five Inches thick.

*Plum-Trees*, *Apricock-Trees*, *Azeroll* or *Garden Haw-Trees*, are passably good at two Inches and an half, and admirable at three or four; It is no matter whether the Graft be of one, or two, or three years growth, or whether it be covered up again or no, though it would be better it were, but I would not have them either smaller or older than I have Express'd.

Those sorts of *Trees* that attain to a due bigness the first, or at least the second year, prove ordinarily admirable ones, because that shows they are Grafted upon a very good Stock.

*Apple-Trees* Grafted on *Paradise Stocks*, and *Early* or *Hasting Cherry-Trees*, are good from an Inch and an half to two Inches thickness.

*Standard-Trees* must be straight, and be at least full six good foot high, and five or six Inches thick below, and four or five above, always their *Bark* as little rugged as may be, and rather on the contrary, smooth and shining as a mark or their Youth, and of the goodness of the Soil from which they are taken.

As to the manner how *Trees* should be fashioned, I Judge that for all sorts of *Dwarf* or *Wall-Trees*, it is better they should be straight, and consisting only of one entire *Stick*, and of one only Graft, than to be compos'd of two or three Grafts, or several branches, the new sprouts that will shoot out round about the single body of the *Tree* when top'd, and new Planted, being more fit and pliable to be turned as we would have them, to make a fair *Tree*, than if they consist'd of two *Sticks*, or of old branches, because we cannot be assured from what part of those old branches of the new planted *Tree*, the new Sprouts will shoot, and because commonly they grow ill favour'dly, and so confusedly interlaced one with another, that we are forced to cut them quite away, and consequently to make so many wounds in the *Tree*, which is find lost both for the advancement

Fruit Trees to be bought of none but Gard'ners of known skill &c.

When Tree Stocks and plants are to be chosen, And Directions what chiefly to consider in them.

Marks of Vigorous Plants. Marks of unsound Plants.

Marks of Bad Peach Plants. Of what thickness and Age they should, or should not be.

The thickness and Age required in Plum-Trees, Apricock-Trees, and Azeroll or Garden Haw-Trees.

The proportion of Apple-Trees grafted on paradise Stocks. The proportion and other good Qualities required in Standard Plants. How Trees should be shaped and fashioned.

would have it have good Eyes on each, and then we must never take those whose Eyes Branches, and especially in *Peach-Trees*; so that we must never take those whose Eyes are as 'twere put out, that is to say, their issues stopt up, because 'tis very rarely that any new branches spring out from such; and 'tis so true that I desire but one single stick, that commonly when I find two grafts, I take away the weakest, and preserve only that which is the more vigorous and better placed of the two.

As for *Standard-Trees* that are to be planted in the full and open air, I am content they should have some branches about their tops, that may be shortned when they are new planted, because we require not so regular an exactness for the Beauty of these tall Trees, as we do for that of lesser ones; it being sufficient if those of the former sort be adorned with tops, that Spread into but any thing nigh a round figure, to be reasonably enough, handsome in their kind.

## CHAP. XVIII.

### *How to choose Trees when already drawn out of the Nursery Gardens.*

How to choose  
Trees when al-  
ready taken up.  
Marks of Trees  
spoiled.

**I**F the Trees be already pull'd up, we must not only have regard to all the particulars above expressed, without neglecting one of them, but we must besides have a care they have not been too long taken up; so that their bark is grown shriveled, and their wood dry, and perhaps quite dead; or that their bark be not too much peeled off, or the grafting place strangled with too hard binding with Pack-thread, or that they be not grafted too low, and especially in *Peach-Trees*, so that to place the roots as they should be, we must necessarily be forced to bury the Grafts under Ground in planting them; or else grafted too high, so that they cannot begin a well proportioned *Wall*, or *Dwarf-Tree*, both which ought to begin about six or seven inches from the Ground.

But this is not all, for we must take special heed too to the roots, because though they had all the other necessary good qualifications in perfection, yet if their roots be much defective, we must e'en reckon such Trees good for nothing.

Good qualificati-  
ons required in  
the roots of  
young Trees.

Marks of a Dying  
Tree.

To be able to pronounce a Tree then to be well qualified as to its roots, in the first place they must be of a proportionable thickness to the bigness of the Tree, that is, it must have at least one root very near as big as the body of the Tree; for when they are all small and *Fibrous*, and like a head of Hair, it is almost an infallible sign of the weakness of the Tree, and of its approaching death, or at least of its never being likely to produce any good effect; neither is the over great quantity of such *Fibres* any very good sign.

In the second place we must see that the principal roots be neither rotten nor split, nor very much peeled or unbarked, nor grown very red, or dry or hard; for if they be rotten, they show a great infirmity in the principle of life of the whole Tree, the roots never rotting when the Tree is in good health; If they be split in the place out of which they Spring, it is a wound that may be termed incurable, and the *Gangreen* and *Rottenness* will here upon it, and so it will be left like a Work-man without either hands or tools.

What caution is  
to be used in  
taking up Trees.

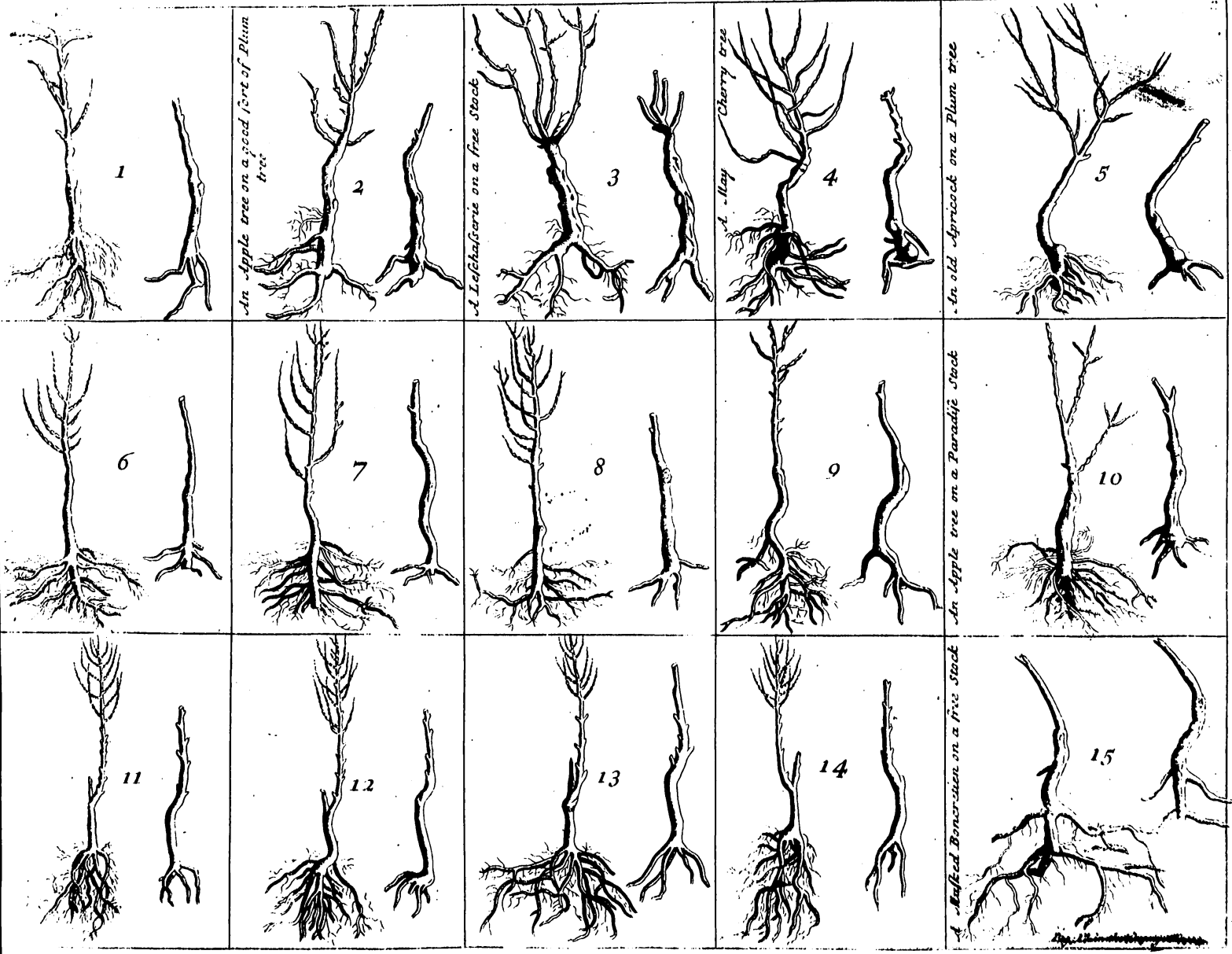
And therefore, they who pull up Trees should be very careful to do it dextrously and gently, and for that effect to make good holes, that they may not be obliged to strain any part of them too violently when they draw them up, or else they will not fail to split or break some good Root or other.

Other signs of  
decaying or Dying  
Plants taken  
from their Roots.

If likewise they be too much grated or unbark't in those parts, which should be most particularly preserved, those are also dangerous wounds, and especially in *Stone Fruit-Trees*, the gum seldom failing to breed in them.

And in fine, if the roots be dried up either by frost, or by having been too long drawn out of the Ground, and exposed to the air, we are to Reject that Tree, it being certain it will never take to grow again.

And over and above all these cautions, it is to be wished that the Tree to be chosen



*An Apple tree on a good sort of Plum tree*

*A Tefchagarie on a free Stock*

*A May Cherry tree*

*An old Apricot on a Plum tree*

*An Apple tree on a Paradise Stock*

*A Balked Boneramen on a free Stock*

that when the tree is planted, they may be conveniently turned towards that side where the good Soil is.

I most particularly value the young roots that are Newliet shot out, they sprouting commonly out of that part of the main body nearest the surface of the Ground, and care little for the old ones, which are commonly knotty, and in *Pear-Trees*, *Plum-Trees*, *Wildings*, &c. they are blackish, whereas the young ones are reddish, and pretty smooth and even; In *Almond-Trees*, they are Whitish, in *Mulberry-Trees*, yellowish, and in *Cherry-Trees* Reddish.

## CHAP. XIX.

## How to prepare a Tree for Planting.

His preparation is of so great a consequence for the making of Trees take new footings, and grow again, that very often they take, and produce a good effect only because they were well prepared before they were replanted, and no less often fail taking, or producing a good head or top, because they were ill prepared.

There are two things to be prepared in them, viz. a less principal one which is the head or top, and another which is most highly principal, and important, and that is the foot or roots.

As to the head, there is but little mystery in ordering that, either in *Standard* or *Dwarf*-Trees, it being needful only for that effect, to remember these two points.

The first is, that as it appears, we do a great prejudice to a Tree when we pluck it up, because we always weaken it thereby, and abate its vigour, and its activity at least for some time, we must therefore take off so much of its charge and burthen about its head, as may be proportionable to what we take from it of that strength and activity, as we certainly do by removing to a new place, and retrenching it of some of its Roots: That is a maxim that needs no proof.

The second point, we are to be mindful of, is, that we must leave its body no higher than is convenient for the use the Tree is designed for: Some being to produce their effect very low, as the *Dwarfs* and *Wall-Trees*, which therefore must be cut pretty short, and others to produce theirs very high, as the *Standard-Trees* which therefore must be left of a considerable height: But I seldom cut either sort of them to the length they are to be of, till I have first finish'd the whole operation, that is to be performed about their roots.

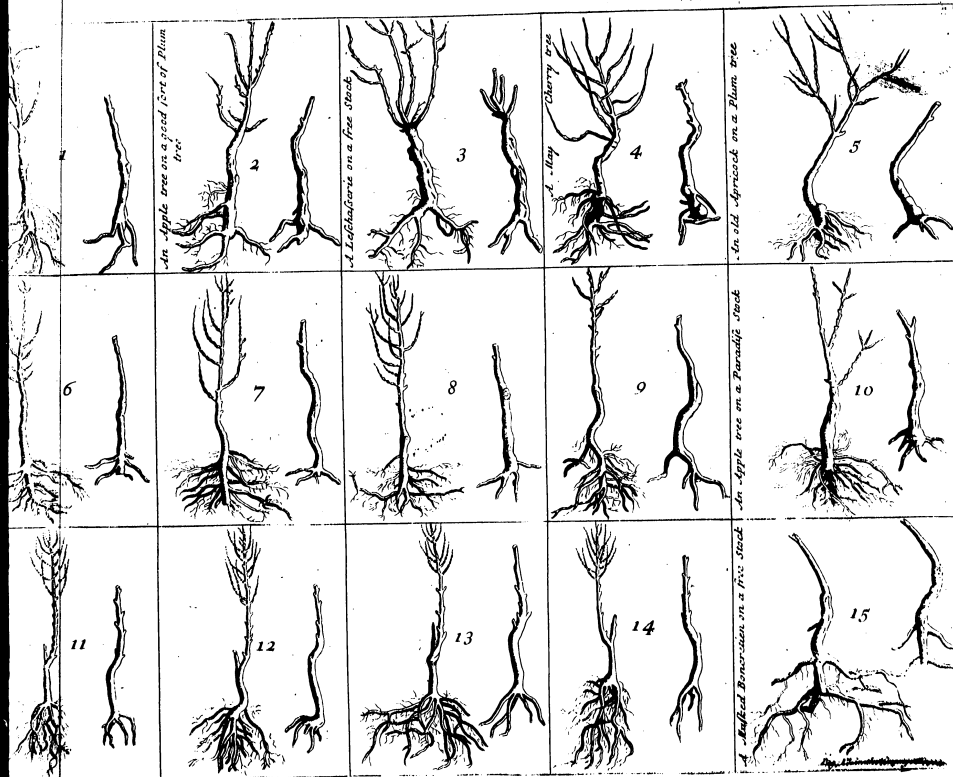
And this is the Method I observe in doing it.

The first I order all the *Fibres* to be cut off as near as can be to the place out of which it springs, unless it be a Tree that I plant again as soon as ever 'tis pluck'd up, without leaving it a moment out of the Ground, otherwise if it continue never so little while in the air, all that would be good to preserve of its root, which is a kind of tuft of White small hair-like roots or *Fibres*, turns presently black and consequently spoils, being as it seems no more able to endure the air, than some sorts of fish that die as soon as ever they are out of the Water. But we can never have opportunity to save this White *Fibrous* part of the roots, but when we pull up a Tree in one part of our Garden, to plant it immediately in another place of the same Garden, for then indeed we may save some part of those *Fibres* which is not broken, and whose extremities or points appear still acting as 'twere, and that comes out of a good place, otherwise if all those conditions be not found in it, we are not to make any account of it; and for the better preservation of it, we may too at the same time, take along with it some of its former mold, that hangs next about it, like a kind of Turf, taking care in planting it to place and spread out well that hairy or *Fibrous* part.

To return now to order a Tree that has been longer pulled up, I first of all then take away all that *Fibrous* or hairy part which many Gard'ners save with so much care, and so little reason, in such Trees as those: And when I am about focking any large Plantation, I order my people immediately to fall to work to retrenching from the Trees, what is to be cut from them, before I plant them, and that both in the day time in some bye place of the Garden, and particularly in the night, in some place within-doors by candle light, to hinder the delaying of some other work no less in half, that cannot be done but without-doors; and so by that means, I take advantage of the night, which comes upon us so soon, and so inconveniently at the usual season of making our plantations.

A a

The



The Author's Method in Trimming the Roots of Trees.

How to order the Roots of a Tree that has been longer pulled up.

The *Fibres* being thus taken away, and by that means, the greater roots laid open to my full view, I am the better able to see the bad ones to take them quite off, and to discern the good ones to save them, and afterwards to regulate the cutting them to the exact length I would leave them of; and very often, when I find the roots of any Trees a little too much dried, I order them to be steeped seven or eight hours in water before I replant them.

What the Author means by Good and bad Roots.

When I speak of good and bad roots, it may be thought I mean by these latter, only such roots as are broken, or unbarked, or rotten, or dry; But yet I mean something of greater consequence; and that is, that every Tree that is planted, and especially every Nursery-Tree, shoots out sometimes, either all good roots, or all bad ones, or both good ones and bad ones at the same time, which comes to pass as follows.

Notes how to distinguish them, and Instructions how to deal with them.

A Tree planted with the preparations recommended by me, if it takes, must shoot forth new roots, or else it dies, all its old roots being of no service to it; And of those new ones, some are fair and thick, and some are feeble and small; the fair ones will spring either out of the Extremities of those which we left it, which is most to be desired, or else from some other part, that is, either from the body of the Tree, and consequently above the old roots, which composed the extrem parts of the Tree, or from that part of the old ones that is nearest the Body of the Tree, whilst the old ones either have shot out nothing at all throughout their whole extent, or but very small roots out of their Extremities, and some thicker ones a little further off those Extremities.

In which two Cases, the thick ones growing either out of the Body of the Tree, or out of any part of the old roots but their ends, make all the rest both old and new insensibly to perish, and dwindle away, and therefore the perishing ones are to be counted bad, because if not taken away, they make the Tree grow Yellow and Languish in some part of its top, or head.

It is no hard matter to know the good ones from the bad ones, because that supposing according to the order of nature, the lower part of the Body of the Tree planted, should, as in truth it ought, be always bigger than the rest of it, and maintain it self always in that condition, yet if we perceive that part instead of enlarging it self proportionably to the rest of the body, according to the same order of nature, to remain on the contrary smaller than some part a little higher, from whence in effect we find some fair roots to spring, then the unthrifty part is to be looked upon as 'twere accursed, and abandoned by Mother Nature, which seems to take pleasure in bestowing its favours upon another, and consequently we must entirely cut away all that lesser part with all that it had shot forth before, (which many Gardiners call *Pivots*, but are mistaken, as I shall afterwards shew.)

Pivot, a Hinge or Axel-Tree.

The first thing to be done then in this case, is entirely to take away all that part of it that appears to be so abandoned and disgraced, as close as we can, to the part well nourished and which is as 'twere in favour, that we may only preserve those roots that spring from the fortunate part, what kind of ones, or in how small a number soever they be, for indeed the number of them should never be very great; and above all, we must take care as I have said, to take away the greatest part of the old ones, which, far from having any appearance of vigour and of youth, or a lively and fresh colour, look all Black, shriveled, and rugged, and worn out, and therefore we are only to esteem those which are fresh and new, and that we find at the same time well placed.

Of what length the good Roots are to be left in Dwarf, Standard, &c.

And these young ones are to be kept short proportionably to their length, the longest in Dwarf-Trees, of what bigness soever it be, which is commonly not very great, never being to exceed eight or nine Inches, nor much above a foot in Standards: We may leave a greater length the roots of Mulberry and Almond-Trees, because those of the first are very soft, and those of the second, very dry and hard, and therefore will be in danger of perishing, if they be cut too short.

After we have fixed the length of the biggest roots of our Fruit-Trees, I am to tell you, that the length of two or three, or four Inches will serve for the lesser and feeble ones, and that proportionably to the bigness of each, the least being always to be the shortest; and here as I have elsewhere told you, we must use a quite contrary method to that we practise in the pruning of the Branches.

One single rank or story of roots is enough, and I make more account of two or three roots well placed, than of twenty middling ones. I term roots to be well placed, when being round about the Tree foot, they are like so many lines drawn from the center to the Circumference.

And

And I would have all my Trees, as near as possible, so prepared, that without being planted they may be able to stand upright of themselves like so many nine-pins, and especially such as are designed for Dwarf, or Standards to grow in the open Air; for to plant against Wall, because we must keep them always a little bending forward and that it is not convenient there should be any root turned towards the Wall, we must entirely cut away all those we find turned that way, and which in appearance were the worst, for having occasion to preserve the best, to be sure I always retrench those that were the worst qualified, and most inconveniently placed.

Methods these Maxims are easy to be understood, and are so easy to practise, that any man that has but seen a Tree prepared according to their prescription, as 'tis represented in the figures therewith inserted, may be able to prepare all sorts of Trees, and especially of those sorts that are not very prickly, as Quince-Trees, Plum-Trees, Wildings of the Woods, &c. But in ordering of Trees that prick, as Wildings come of Quinces, Stones, &c. there, there is a little more difficulty.

And the better to enable my self to compass the ordering of them, as well as of easier Fifteen English Trees, I made choice of fifteen Trees, among the great number that I have taken up and replanted these five and twenty or 30 years, which were such in which I observed a-ny remarkable difference in the situation of their roots, by which I found, that generally all Trees in the spreading of their roots imitated some one of those fifteen, so that having first caused them to be drawn out in figures, exactly as they were when newly pulled up, and afterwards when they were cut and trimmed, ordering them to be drawn over again in other plates, in the condition they were in then, to show how they must be order'd before they be planted, any Gentleman may after that model, regulate the operations that are to be made upon the roots of all sorts of Trees whatsoever.

I likewise thought it very convenient to have them drawn too, in the state they were in, while they were shooting out the new roots they produce after replanting, that every one might see what a Tree well prepared and well planted should do, to thrive and succeed well, and wherein it may have been faulty if it prospers not.

And when I have done all that I think fitting to the roots, then I endeavour discreetly to judge what depth the lowest roots require in the Ground, and what quantity of earth the highest roots must have laid over them; for they must be secured, and put out of the reach, as well of the Injuries of the Air, as of the delving tools, &c. and then I determine of what length or height the Tree must be above Ground, that I may have no occasion to touch it any more after 'tis planted; for we must needs shake and loosen it when we let alone cutting it till after 'tis planted, and that shaking seems to me to be very dangerous to the Tree.

We need not fear the Frost will do any harm to the place where the Tree is cut off, and Shorted, there assuredly never hap'ning any inconvenience that way, as I can maintain to you by certain experience which you may venture to believe upon my word. The length of the Bodies of the Trees to be left above Ground to all sorts of Trees, is to be regulated as follows. If they be little, and to be planted in a dry Soil, they must be allowed six or seven Inches, because that in Summer, their head or top may be able to stretch their foot or rooting, from the burning heat of the Sun; In moist Grounds, they may have ten, or eleven, or twelve at most, that their head or top may not too much hinder the heat from imparting its influence to the foot or root which there has need of it: As for the height of the Bodies of Standards, that is always to be about six or seven Inches in all sorts of Grounds; for taller ones would be too apt to be shaken or torn up by the roots by the Winds, and shorter would be unpleasant to the sight, unless it were a whole entire Plantation of Half Standards, as is often practised for Plum-Trees, Cherry-Trees, &c.

We must have a great care in Peach-Trees, to leave them two or three good Eyes or Buds in that proportion of length, that is to remain to them, otherwise they will be in danger of producing nothing but wild Shoots.

I have already told you, that for all sorts of Trees, and especially for Dwarf, I would chuse plants consisting but of one straight stick: As for Standard-Trees, I am not much against their having some Branches; and I willingly leave those Branches long, that being the feeblest cannot so well contribute to the beauty of the Figure, but yet may yield fruit sooner, and of the thick ones I leave two, or three, or sometimes four, which when well placed, may serve to begin the forming of a fair round top, and I shorten them to the length of seven or eight Inches.

The Author's Regulation of the height or Length here to be left to the Bodies of Trees above Ground.

A necessary caution about Peach-Trees.

## CHAP. XX.

*When and how to plant Trees when ready fitted and prepared for it.*

THE first thing to be observed here, is, that in the season of planting, which as all the world knows, lasts from the end of *October*, to the middle of *March*, that is, from the time that the Trees quit their Leaves, till they are almost ready to begin to put forth new ones, we must choose dry, and mild weather, without troubling our heads to take any notice of the Age of the Moon, as formerly was practised, rainy weather is not only incommodious to the Gard'ner in his Work, but also hurtful to the Trees that are then planted, because the mold is then too apt to be reduced to a mortar-like consistence, which makes it not so proper to settle all cleverly down round about, and close to the roots without leaving some hollow between, which it is very expedient to prevent. Now, though all those months be equally fit to plant in, so that it may seem, the sooner it be done, the better, yet as I willingly affect to plant presently after *Marstemas*, in dry and light Grounds, so I care not to plant neither till the end of *February*, in cold and moist ones; because the Trees in these last can do nothing all *Winter*, and may more likely be spoiled there, than be able to preserve themselves, whereas in lighter Grounds, they may begin even that very same *Autumn*, to shoot out some small roots, which is a great advance to them to put them in the way of doing wonders in the following *Spring*.

The second observation is, that we are to regulate exactly all the distances which are to be between one Tree and another, whether they be *Wall-Trees*, *Dwarf-Trees*, or *Standards*, that we may know perfectly both the number of Trees to be planted in general, and how many there are to be of every particular kind.

The third is, to regulate exactly the places to be assigned both to each sort of Tree, and to each particular Tree, I liking best that all the Fruits of the same season, should be placed in the same *Canton*, or *Parcel* of Ground.

The fourth is, to make even by a line, holes about the wideness and form of a hat; for I suppose trenches to be well made, and if so, the Hole, though little, will be big enough to plant the Tree in, and it would be but time, expence, and Labour lost, to make it bigger.

The fifth is to order every Tree to be carried and laid near its hole, before we begin to plant any of them; and if there be occasion to plant any *Dwarf-Trees* about any Squares, or to form a *Quincunx*, I would have the fairest, and best qualified placed particularly at the corners of the several Squares, or Ranks, and likewise in *Wall-plantations*. It's most convenient always to plant the finest Trees, and those that bear the finest Fruits, in the most eminent places, and the most visited, as, near the *Gates*, and along those *Finis Walls* near the fairest *Walks*.

Yet though I here make choice of the fairest, it do's not follow that we are never to plant any but such as are fair, and accompanied with all the hopeful appearances of thriving; Though it be true enough that after we have taken all the care we can to choose none but fine ones, yet some of them will be always finer than the others.

The Trees then being all carried and laid every one near its assigned place, if we be to plant *Dwarf-Trees*, I begin with the corners of each Square, that they may serve to guide us to place the others direct in the same Lines; and if the Soil has been newly dug up and moved, and mixed with a good quantity of long dung, so that it seems not to be so firm and close as it should be, I take care to sink my Trees but about half a foot, meaning that the extremity of the lowest root of the Tree is but half a foot deep in the Earth, because as I reckon, the Ground will sink at least half a foot; and because it is better to plant too high, than too low, at the end of some months, my Trees will be found sunk about a foot into the Earth, which is the justest measure we can assign them in that respect, Trees planted deeper, almost always dying in a few years.

When I have planted the corner Trees, then I place a man at that rank I have a mind to plant, to adjust the Trees with a line, that they may be sure to be planted in a right line, and I take another man with a spade to cover up the roots of the Trees as fast as I present them in their places, and be informed by my line manager that they are right in the line, and so in one morning I will plant four or five hundred *Dwarf-Trees* with ease.

It is yet more easy to plant in a little time a great many *Wall-Trees*, because there is no need of using a line; but in forming a *Quincunx*, we cannot go so fast, because that, as every Tree must answer exactly to two ranks, there must be two *Ainers*, viz. one for each rank, and there is always some time lost before the Tree can be placed so exactly as equally to answer two several ranks.

And we must not only be careful to plant our Trees a little high, and very straight, but we must be particularly mindful to turn their principal roots towards the good Soil; this being the most important point of all; so that though it be much to be desired, that all Trees designed for *Dwarfs*, should appear straight upright upon their feet, after they are planted; yet if the disposition of their Roots which perhaps naturally incline to Pirot, or spread round, require that the Tree should be a little stooped, to give that good situation to its Roots which I desire they should have, that is, to give them scope to spread rather between two Earths, than to shoot right downward, I not only make no difficulty to hold the head or the top of the Tree a little stooped, and that always over the line that is stretched out by it, but I counsel it as a thing necessary; otherwise, the roots that shoot from such a Tree, being naturally inclined to follow the bent of those out of which they sprout, it will happen, that those roots being forced to shoot downwards as low as the bad mold towards the bottom, or beyond the reach of the rain water, the Tree will thereupon grow sick, and languish, and will make an ill-favoured figure, and bring but scurvy Fruit, and will at last die.

From what I have said of the good situation of the roots, it follows that if we be to plant any Trees along by the sides of any Walk or Alley, we must take care to avoid turning the principal roots towards the Alley side, and with much greater reason, ought we to do the same when we are planting *Wall-Trees*, and to take special care we leave not any good root of them, in vain to spend its force and vigour against the Walls.

This stooping of the head in low Trees, need not raise in us any surmise, or put us in any apprehension of spoiling the beauty either of their figure in particular, or of that of the whole plantation in general, because it is not the same case with Branches that are to spring forth, as 'tis with roots; for the Branches do not at all follow the Disposition of the stooping head; on the contrary, they grow regularly upright round about their trunk, and so because their rise is very near the Ground, their Trees make as a well shaped figure, as if they had been planted upright upon their center.

It is the standard Trees that are to grow in the full air, that we are necessarily obliged to plant as upright upon their center as 'tis possible; for otherwise their Trunks would always remain standing awry, and consequently would make an unseemly figure, and besides would be more subject to the insults of violent winds, and be apt to be overturned by them; and therefore for that same consideration, they must be planted a little deeper than other Trees, that is, they must be placed a full foot deep in the Ground, and though I caution people not to trample over the Ground where our small Trees are planted, for fear of making them sink too deep, and because they are in no danger of the Winds, on the contrary, I advise them to press the Ground as hard and close as they can, against the feet of these Standards, to fasten them, and make them the firmer to resist the violence of the winds.

After the planting of every Tree, if I have the convenience of any dung-hills, I put a bed of two or three Inches thick of dung over every Tree foot, and cover it over at the same time with a little Mold, to hide it from being seen, as being no handsome sight.

This bed of dung is not so much to improve the Ground, which I suppose already to be good, and well prepared, as particularly to hinder the burning heat of the Months of *April*, *May*, and *June*, from penetrating to their roots, and by consequence from putting them out of due temper, and hindering them from performing their function, which would cause no less than the death of the Trees.

If I want dung, I content my self during those first dangerous Months, to cover the feet of my Trees with a bed of Weeds, or Fern; I hinder any thing from growing there that may shade or cloud the young shoots, and if there be a great drought, as it often happens, I order a pitcher of water to be poured upon each Tree foot, every fifteen days during the three or four hot Months, making first a kind of circular trench round the Tree that the water may pierce quite down to it, and when the water is all imbibed, I fill and make up this circle again, even with the rest of the Ground, so that 'tis not discerned.

But

The fourth to make convenient Holes, or Trenches, to plant them in, &c.

The Author's Method of planting Dwarf-Trees, &c.

Of What Depth Trees are to be planted.

The use of Dung about Trees.

A bed of Weeds or fern may serve in want of Dung. In very dry weather, to be watered every 15 days in the hot months.

But if the season prove rainy, those waterings will not be necessary. And after all these preparations, and precautions, yet we commonly think our selves happy enough if we can Stock our plantations so well, as to have but few Trees miscarry under our conduct.

## CHAP. XXI.

### How to order Trees planted for Reserves in Other Cases, or Baskets.

**B**UT notwithstanding all this, because some Trees may happen to die, and yet as far as 'tis possible, it is to be desired, our plantation should be compleated the very first year, I use to prepare a greater number of Trees than I have actually need of to fill up my plantation, that I may always have some as 'twere in a Body of Reserve, and for that purpose, it is my practise at the same time I am filling up my plantations, to plant some Supernumerary Trees of every kind in *Other Cases*, or *Baskets*, but more of *Stone*, than of *Kernel Fruits*, because those former most commonly are in greater hazard of dying than the others.

Accordingly I chuse out some good place in the *Garden*, (the most shady parts of it being the most proper for this effect) and there I plant some Trees in *Other Baskets*, well ticketed, or at least carefully set down in my Book according to the order both of their Ranks, and of the respective places allotted to them in those Ranks, that I may have recourse to them, when any Tree shall happen to die or languish in its place; Being desirous, if it be possible, that my plantation should continue finished and compleat as well in its figure, as in the kinds of Trees, according to my first modelling of it.

How to be plac'd.

In order to which, I keep in a leaning posture in the Reservatory Baskets those Trees that are designed for the Wall, and in a straight and upright posture in the middle of the said Baskets, those that are intended for *Dwarf*, that when I have occasion for either of them, I may the more commodiously remove and place them with Basket and all, so as the Tree may be every whit as well situated, as if it had been first planted there, which it would not be, if the Tree designed for a *Wall-Tree*, were placed bolt upright in the middle of the Basket, because we could not so easily bend the Tree towards the Wall; the same inconvenience almost happens if we be to plant for a *Dwarf*, a Tree that we find in a leaning posture in a Reservatory Basket, though of the two, that be easier to place well than the Tree designed for a *Wall-Tree*.

This operation of the Transporting of Reserve Trees, may be done till Mid-summer; and when we have a mind to go about it, we must first by way of preparation, water those Reserve Trees well that we design to remove, (which probably will be the fairest we have) and then move the Earth away neatly round about the Baskets, for fear of breaking the roots of the plants in case they have shot any beyond the compass of their Baskets; and we must chuse rainy weather to do it in, or at least weather that is mild and temperate, and a time when the Sun is low, or a little after he is set, or a little before he rises; and he must be extremely carefull not to shake or loosen the Tree in the least manner in the World, neither when we are taking it up, nor when we are carrying it off, nor when we are replacing it in its designed station, the shaking and loosening of it being in this case, very pernicious and often Mortal.

Now when in removing these Reserve Trees, we perceive any roots of them to have begun to shoot out of the Basket, we must first in placing it, be very careful to preserve the points of those new Roots, place them well, and support them with good mold, cover them immediately, and ramm the Earth close against the Basket, and then water the Ground pretty plentifully round about the Basket, to make the Earth next to it, cleave the closer about it, so as there may remain no hollow, which may be known by the waters not sinking so hastily when you pour it on the place as before; And this watering is indispensably necessary in what manner soever we remove our Reserve Trees: And lastly, on those days when the Sun shines hot, we must cover the head of the Tree with straw Screens, till such time as it begins to sprout, and then we may begin to take them off a nights; But this last precaution is not necessary but when we see any new roots sprout out of the Basket, or when the Tree has been shaken and loosened.

The

The same care and caution we use in placing against Walls Trees thus brought up in Reserve Baskets: We must practise too in placing the same sort of Trees for *Dwarfs* or *Standards*, and above all, we must have a special care to leave those new roots as little as possible in the Air; otherwise they will presently grow Black, and consequently die.

I have nothing else to add about this head, but only directions how to make these Baskets, which must be made purposely, and so loose wrought that you may see through them, as well because the roots of the plants may the more easily grow through them, as that taking up less stuff, they may cost so much the less, and besides when there is so much stuff as to make them too thick and impenetrable, it do's but harm. They must be made of the greenest and freshest gathered *Osier* that is to be had, that being put quite green into the Earth, they may last the longer without Rotting, that is, at least a whole Year; for those that have been made any time, rot sooner. They must not be very deep, because then they would be too troublesome to remove, eight or nine Inches depth is enough, that when they are set into the Ground as deep as till their brims be covered, we may have room enough to put into them first about four or five Inches depth of Mold, and then the Tree, and after that, cover their roots with a little quantity of Earth more; and we may in removing these Reserve Trees with their Baskets, take off some of the uppermost Mold, if we find them too cumbersome to carry; But as I told you before, we must be very careful to ramm down the Earth close about the Baskets, that there remain no chink or hollow.

As to the bigness of the Baskets, it must be proportionable to the length of the roots of the Trees we design to plant in them: They must be at least big enough to afford us room to put in three or four Inches depth of Mold between the ends of the roots, and the Brim of the Basket, so that for Trees designed for *Wall Trees*, the Baskets need not be so large as otherwise, because those Trees are planted in them in a leaning posture, and therefore lie so near one side, that all their roots are turned to the other, and so their new roots may find room enough provided the Basket be wide enough; But for Trees designed for *Dwarfs*, because they must be planted in the middle, and therefore shoot out roots round about them, the Baskets for them must be a little Larger.

The Baskets likewise for *Standards*, must be proportionably greater than for low Trees. I need not tell you, that the Baskets must be round, because every Body knows that, though they might be made Oval or Square too, but then they would cost more and be never a whit the better.

The Difference therefore of the Bigness of Trees obliges us to make Baskets of three different Sizes, viz. Little ones of about a foot Diameter, Midling ones, of about fifteen or sixteen Inches, and Great ones, of about eighteen or twenty. The principal Quality most to be look'd after in them, is, that their bottom be strong and solid enough to bear without bursting, the weight of Earth to be charged upon them, and that the Edges both above and below be so well wrought as not to unravel; There must be also a Welt round about the middle for the same reason.

And I am not content to make use of this precaution of Reserve-Trees at the time of my first planting any great plantations, but I practise it every year, for a certain small number of Trees, according to the bigness of the plantation I have to cultivate, that when there happens any accident to any of the Trees placed in it, as there may happen many, I may remedy it as soon as I am threat'ned with it, or as soon as ever the accident happens; for in fine we should always be in a condition to keep our plantation full and compleat without suffering any Tree in it that will not comply with our design.

A little cost will put our minds at ease in this respect; and for want of that, we may lose much time and pleasure too.

It is now time for us to proceed to the Master Work of Gard'ners, which is Pruning.

## The End of the Third Part of Fruit and Kitchen-Gardens.

A

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<i>August</i> , and <i>September</i> .	The thick English Pear-main.	ibid.
The Autumnal Calville, from <i>October</i> till	The Ice-apple.	ibid.
<i>February</i> .	The Francatu.	ib.
The Cour-pendu or short stalk'd, or Bar-	The Haute Bonté, or High good, other-	ibid.
din Apple, from <i>December</i> till <i>March</i> .	wife called Blandilalic.	ibid.
ibid.	The Rouvézeau.	ibid.
The Fennellet, or Anis-apple, from <i>Decem-</i>	The Chestnut-apple, or Martrange.	ibid.
<i>ber</i> to <i>March</i> .	The Blossomless, or Fig-apple.	ib.
The Api or Ladies-apple, from <i>December</i>	The Petit-bon, or Little-good.	ib.
till <i>April</i> .	The Rose-apple.	ibid.
The Violet-apple, from the end of <i>October</i>		
till <i>Christmas</i> .		

FINIS.

## Part IV.

I



# OF FRUIT-GARDENS AND Kitchen-Gardens.

## VOL. II. PART IV.

### Of Pruning of Fruit-Trees.

#### The INTRODUCTION.

Generally speaking, *Pruning of Trees* is Cutting off some of their *Branches*; and so we commonly say, that a *Tree* is *prun'd*, when many marks appear of *Branches* being cut off. We likewise say, that a *Gardner* *prunes*, when he is cutting some *Branches* from his *Trees* with his *Pruning-Knife*. This *Pruning* has been look'd upon in all *Times*, among the *Citizens* in *Fruit-Trees*, as the Master-piece of *Gard'ning*: And, indeed, the Practice of it began not in our Days, for it was held as a Maxim many Ages since, as it appears by the Testimony of the Ancients; so that, to speak the Truth, we only follow now, or perhaps improve what was practis'd by our Fore-fathers.

This Custom of *Pruning* does not commonly extend to all sorts of *Fruit-Trees*, only to such as are known in *Gardens* by the Names of *Espaliers*, or *Wall-Fruit-Trees*, *Compter-Espaliers* or *Pole-Hedges* and *Dwarfs*. As for those that are called *Tall-standards*, they are seldom *prun'd*, unless it be once or twice in their first Years, either to give them the first Turn of a Round Figure, and Overture, which is requisite at the time they first begin to form an Head; or to take away some irregular *Branches*, which in process of Time might intangle or disfigure that Head; which *Pruning* is absolutely necessary. A kind of *Pruning* is likewise practis'd upon very old *Tall-standards*, by cutting off the dead or languishing *Branches*, both large and small; but that is rather called *Cleaning*, or *Disincumbering*, than *Pruning*.

Columella,  
Theophrastus,  
Xenophon.

Although

Although the first Idea People have of *Pruning*, is commonly in relation to the Heads of *Trees*, that is, their *Branches*, which frequently want some Correction, to be put in a way of doing well, according to the Mind of their Master; yet notwithstanding, there is still another *Trimming* which is very material, and that is the *Trimming of Routes*; which is perform'd upon two Occasions; of which, the one, that is the most common, is generally practis'd upon all *Trees*, before they are planted; (which I have sufficiently mention'd in the Treatise of *Plantations*;) The other, which is extraordinary, is only made use of upon some on the Place, according as one designs to make some more, and others less vigorous than they are. This I will speak of at the End of this Treatise.

This Maxim, or Necessity of *Pruning* the Heads of all *Trees*, not being *Tall-fandastis*, being well establish'd, tho there are some Erroneous Opinions in it, in relation to very vigorous *Dwarfs*, which I shall easily destroy. I think my self indispensibly oblig'd to examine here, as much as in me lies, whatever relates to so renown'd a Practice in the Management of *Fruit-Trees*; therefore I protest, at first, that I will make no particular Reserve to my self; but on the contrary, that I will use my utmost Endeavours, not to omit any thing whatever of what I have been able to apprehend in it hitherto, and of what I have so long practis'd with Success.

I am perswaded that *Pruning* is not only a very useful, but also a very curious thing, and capable of affording Pleasure to those that understand it: But at the same time it must be acknowledg'd, that it is likewise pernicious, or dangerous, when perform'd by unskillful Hands.

For, to speak properly, *Pruning*, in the Sense we take it, is not barely Cutting; every body cuts; but few *prune*; nothing is more easy than to cut: And it may even sometimes happen by chance, that what has been cut without discretion, may succeed well enough, tho for the most part the Consequences prove very bad; whereas there being a great deal of Judgment and Rule in *Pruning* skillfully, the Success is generally certain, at least, as to what may depend on the *Gard'ner*; for all does not depend on him: It is well known that he is neither Master of Times, or Seasons; which must of necessity, and chiefly concur to the perfecting his Work. And therefore, when People have not that Abundance of *Fruit* they desire, and did hope for, the Fault ought not always to be imputed to the *Gard'ner*: He is only blameable when his *Trees* are not well shap'd, when they do not blossom abundantly, and when the *Fruit* is not universally and equally beautiful, so as to see, upon one and the same *Tree*, *Fruit* of very different sizes; for he is partly Master of that.

## CHAP. I.

### Definition of the Pruning of Trees.

TO let you understand what this *Pruning* is; I say, that it is an Operation of *Gard'ning* for three Things, which are to be done yearly to *Trees*, betwixt the beginning of the Month of *November*, and the End of *March*:

The First is, To take away all those *Branches* that are naught, or might be prejudicial, either to the Abundance, or Goodness of the *Fruit*; as also to the Beauty of the *Tree*.

The Second, To preserve all those that may be of good use to those *Trees*: And the Third, Prudently to clip those that are found too long, and not to cut any thing off those that have not too much length.

And all this in order to make a *Tree* lasting, to beautifie it, and at the same time dispose it soon to bear a great deal of fine and good *Fruit*:

By *Branches* that are naught, I mean those that are of false *Wood*, those that are decay'd by having yielded much *Fruit*, and those that are too small, or have no disposition to produce either *Wood* or *Fruit*.

By *Branches* that may be prejudicial, either to the Beauty of the *Tree*, Abundance, or Goodness of the *Fruit*, I mean such as might cause a Confusion, or shadow the *Fruit*, as well as those that take part of the *Sap* of the *Tree*, when it is over-charg'd with *Wood*, compar'd to its Vigour.

By *Branches* that may be of good Use, I mean all those that are so well condition'd, as to be fit to contribute to the beautiful Figure of the *Tree*, and Infallibly to produce *Fruit*.

By *Branches* that are too long, I mean such as exceed nine or ten liches in length, and so consequently want to be shorten'd; such are all the thick *Branches*, which we call *Branches for Wood*; and some of the small ones, which we call *Branches for Fruit*.

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In fine, By *Branches* that have not too much length, I mean certain little *Branches*, which being of a moderate Thickness, have *Buds* at the Ends of them, or are in a Disposition of having some the following Year, and yet are strong enough to bear the *Fruit* they are to produce, without breaking.

This so material Distinction in point of *Branches*, shall be more particularly explain'd in the Chapters that treat of the Manner of *Pruning*.

I will say nothing here of the Original of *Pruning*, by reason that what has been said of it is fabulous, and ridiculous, and consequently cannot at present serve for Instruction. For Example, What signifies it to know, that some pretend to derive the Original of *Pruning* from that Province of *Greece*, which was called *Nauplia*; a Country abounding in *Vineyards*: An *Ass* having brouz'd or nibbl'd some *Branches* of *Vines*, it was observ'd that the nibbl'd *Branches* produc'd a great many more *Grapes*, than those that were untouch'd; which made them resolve thenceforward to shorten, or break, or cut, that is, to *prune* all the *Branches* of *Vines*. It is moreover reported, that so much Success attend'd this Experiment, that to express their Acknowledgment of so fine an Invention, they erected in one of the finest Places of that Province, a Marble Statue to that Animal, as to the Author of *Pruning* of *Vines*; that is to say, to the Author of the Abundance of *Wine*. And our Books tell us, that this is the true Reason of *Bacchus*'s being drawn mounted upon an *Ass*.

The Usefulness of *Pruning* *Vines* being visible; it was judg'd from thence, that it would not be less advantageous to *prune* *Fruit-Trees*; and thus, in the Beginnings, they did in this, as has been done in all other Arts and Sciences, they began to cut grossly, that is, to *prune* some of the *Branches* of *Trees*, till by degrees they have study'd to refine upon it; and, even in these Days, People still study, by Reason and Observation, to improve, and render themselves more and more perfect in it. This is the Information we receive from Books, as to the Original of *Pruning*: It will easily be granted, that this is not a very material Thing. But, What is very necessary to be known,

Are three principal Points; without the understanding of which, it seems impossible to me, either to speak well of this *Pruning*, or to perform it.

The First relates to the Reasons for which it is done.

The Second, To the Time in which it must be done.

And the Third relates to the Manner of doing it with Skill and Success.

Let us examine these three Points, one after another.

## CHAP. II.

### Of the Reasons of Pruning.

I Will begin with the Reasons for which *Pruning* is used, which, in my Opinion, are two. The First, and chief, is, That which *Pruning* aims at, The speedy getting of abundance of fine and good *Fruit*; without which, no *Fruit-Trees* would be had, or cultivated.

The Second, which is pretty considerable, informs us, That *Pruning* serves to make *Trees*, in all Seasons, even in those in which they have neither *Fruit* nor *Leaves*, appear more agreeable to Sight, than they would do if they were not *prun'd*.

Now, the Satisfaction of the Sight in this last Point depends wholly upon the well-understood, and well-proportion'd Figure, a skilful Hand is capable of giving to each *Tree*.

And, as to what relates to the Abundance of fine and good *Fruit*, as much as the Industry of the *Gard'ner* can contribute to it, it depends first upon the Knowledge he must have of every *Branch* in particular, to know those that are good, from those that are not: It depends, in the second place, upon the judicious Distinction which is to be made among the *Branches*, wholly to take away those that are bad, or useless, and carefully to preserve all the good ones, be they *Branches for Wood*, or *Branches for Fruit*; with this caution, that if among these last, some be found not too long, they shall be left as they are: But as to the main, of the others which are too long, they must be *Prun'd* more or less, according as Reason may require, either as to the Abundance, or even to the Figure of the *Tree*. This abundance depends, in the third Place, upon the proper time of *Pruning*, all times not being fit for it.

In relation to the two first Heads, which relate to the Knowledge and Distinction of *Branches* in general, I shall shew hereafter in what Order, and to what Use Nature produces them upon *Fruit-Trees*; how some are useful for one thing, others for another, and chiefly

chiefly how some have more Disposition to Fructify, and others less; and shall conclude from thence, that it is according to that Order, and that Intention of Nature, and according to that more or less Disposition, that those *Branches* must be Order'd and *Prun'd* in a different manner, the one from the other.

But before I enter any farther into that matter, which has a great extent, since I must therein explain, especially the Manner, or Rules that must be practis'd in the *Pruning* of a great number of *Trees*, which commonly are very different the one from the other; I think, it will not be improper to say first, and as briefly as I can, what I think of the Time of *Pruning*, since that Article is soonest decided.

## CHAP. III.

### Of the Time of Pruning.

**T**HERE is but little to be said upon the Time of *Pruning*, because that by a general Approbation, it is commonly fix'd to the End of Winter, or at the Beginning of the Spring; that is, a little before the *Trees* sprout, and partly about the time that the *Buds* begin to swell, in order to become *Blossoms*, and the others to stretch out to become *Branches*: Which happens infallibly, after the great Colds (which generally attend the Months of *November*, *December*, *January*, and *February*, are past;) the Spring coming in, and consequently the Air beginning to grow hot, and mild, the *Plants*, that had wholly ceas'd to act during four Months, begin, as it were, to waken, and really to enter into Action: That first Motion is constantly perform'd at the Head, before it begins at the *Roots*; that is to be understood, when the Cold has been so great, as to interrupt their Function; for among us, in mild Winters, there is not much more Interruption, than in very hot Countries. We shall shew this Order in another place. This External Renewing of Action is a certain Sign that it is time to *prune*.

People were formerly so scrupulous as to the precise Time of *Pruning*, that they durst not absolutely labour about it, but in the Decree of the Moons of *February* and *March*: It was almost the only Maxim, in that Case, that appear'd well establish'd, and was in effect inviolably observed. It may be said, that it was a kind of Rote; which most *Gard'ners* affected with an incredible Oblinacy; or rather, that it was a kind of Tyranny, which they exercis'd, when they were employ'd by Gentlemen who were Lovers of their *Fruit-Trees*. That Custom was grown to that height, that both the one and the other would have thought all lost, had any thing been *prun'd* out of those Declinings: It was an Epidemical Distemper; of which, there are still but too many ill Remains. I grant that in other things that are above my Reach, and in which I have no Insight, it may be necessary to observe the Motions of the Moon; but as to the *Pruning* of *Trees*, and whatever has any relation to *Gard'ning*, I will take upon me to shew hereafter, in a Treatise of some Reflections I have made upon *Husbandry*, that those Observations are not only vain, but even Chimerical. And whereas I was formerly infected with that Opinion myself, and am now fully disabus'd of it, I do not despair of ridding *Gard'ners* of that kind of Notion, or Ignorance, and at the same time cure the Disquiets of several ingenious Men upon that Subject.

'Tis true, that it is very good to *prune* at the End of *February*, and at the Beginning of *March*, which are commonly Times of Decrease; but it is likewise as true, that without minding the Moon, one may begin to *prune* as soon as the Leaves of the *Trees* are fall; that is, at the End of *October*, or, at least, about the Middle of *November*; which may be continu'd afterwards for the whole *Winter*, until all be done. And, because that having commonly three sorts of *Trees* to *prune*; the one too weak, the other too vigorous, and the others that are in as good a Case as can be desir'd, I am of Opinion that it may be both prudent and useful, not to *prune* them all at the same time; and that it is proper to *prune* some sooner, and others later. For Example, I am sufficiently persuaded, that the weaker, and more languishing a *Tree* is, the sooner it ought to be *prun'd*, to take from it betimes those *Branches* which, as noisom and useless, must be taken from it at another time; that is, towards the End of the *Winter*. And this is the Reason why the *Pruning* in *November*, *December*, and *January* is very good and wholesom in relation to these; and even better than that of *February* and *March*. And, by the Rule of Contraries, the stronger and more vigorous a *Tree* is, the longer the *Pruning* of it may be deferred; I mean, as to such an one, that the *Pruning* of it may not only safely, but also very usefully be deferred until the End of *April*.

Omnis Arborum  
putatio quando-  
cunque fieri po-  
test a tempore  
causae foliorum,  
Greggeorum.

I advance in this, two Principles, which appear pretty new: Those that are desirous to see the certain Proof of it, may continue to read what follows: As for those who are willing to rely upon my Word and Experience, and are only desirous to see the Sequel of my manner of Practising, they may skip over the Remainder of this Chapter, to proceed to that wherein I explain the Reasons why *Pruning* is necessary.

To establish the two Principles I have heretofore advanc'd, I make use of two Comparisons, whereof the first, which relates to the *Pruning* of weak *Trees*, is drawn from the Conduct of certain frugal Millers, who, with a small quantity of Water, find the Means to manage a Mill that requires a great deal. The Second, which relates to the *Pruning* of very vigorous *Trees*, is taken from other Millers, who knowing how dangerous great Streams of Rising Waters are to their Mills, for a Time suffer the Abundance of Water, which might annoy them, to flow gently by; and the Violence of it being over, they shut their Sluice, or Water-gate, and afterwards employ the Remainder of their Water, according as may be expedient for the Number of Wheels they are to ply.

For the Understanding of these two Comparisons, I say, that the *Sap* in every *Tree* appears to me to be partly the same as Water is in every River: I will say in another place, what Water is in the Pipes of spouting Fountains.

Whether Rivers be large or small, it is still certain that they are beautiful, provided that the Channel of each, whatever it may be, be commonly furnish'd with a quantity of Water proportionable to it; without which, they are miserable, and of no Consideration: So is a *Tree* likewise esteem'd beautiful, whatever Size it be of, (there being both Great and Small,) provided that *Tree* yearly produces sufficient fine *shoots*, from all its Parts; and in quantity, proportionable to its present height and thickness, or bulk; without which, a *Tree* is certainly both ugly and miserable.

It is certain, that while a *Tree* is in a good Ground, and well, the Weather not being so cold, as to freeze the Ground as far as the *Roots*; for such a Cold stops all manner of vegetation; in such a case, the extremities of the old *Roots*, still produce other new ones, and consequently still produce a new *Sap*, as I prove in my *Reflections*, and so there perpetually rises a *Sap*, both into the *Stem* of the *Tree*, and in all the *Branches* which compose the head or top of it; and this, more or less in the whole extent of each, according as the *Sap* is in it self more or less abounding; just as it is in a River, while the Source is good, and no ways obstructed, the Water flows continually, not only in the Bed or Channel, which Art and Nature have provided for it, but also, generally into all the *Branches* into which it may divide it self; that is to say, into all the Brooks, or Rivulets, which may form themselves along its course, and that more or less, according as that Water is in it self more or less abounding.

When we find that a *Tree* has but little vigour, and produces no fine *shoots*, or that having been vigorous the preceding Years, it ceases to be so, so as to produce no more *shoots*, or at least, none but very small and inconsiderable ones, we may say that it is an infallible mark, either, that the Source of the *Sap* is Naturally weak and small, or that it is become so; so that being no longer capable of performing any effect in long *Branches*, nor in many, and yet it being necessary it should produce some for our Profit and Satisfaction, we must betimes cut that *Tree* of its burthen, which is too great, considering its want of Strength and Vigour, and so consequently betimes, wholly cut off a great part of its *Branches*, to the end, that we may, as soon as possibly can be, stop many of those overtures through which part of the *Sap* of that *Tree* did enter; and so that, which for Example, being divided into forty *boughs* seem'd to produce but little effect in each, the same being afterwards contracted, and distributed into half the quantity, will be found sufficient to perform much greater Productions upon that *Tree*, tho' indeed less numerous: It was like a River, whose Source or Spring, was either Naturally weak, or considerably diminish'd, and which, notwithstanding that being yet divided into too many *Branches*, could not perform any thing considerable in any of them; but the same being industriously contracted, or reduc'd, and kept within narrow bounds, so that for the future no part of it may be lost, as it us'd to be; is thereby enabled, at least to turn some Wheel. A Dam, or Sluice made betimes, have perform'd in this, what the good Fortune of a more abounding River would have done, as to several Wheels.

This Reason has induc'd me to advise the *Pruning* of weak *Trees* betimes, and the same Reason informs us, that they must be cut very short, as we will demonstrate hereafter.

Now, that which is a convincing Argument, in relation to the *Pruning* of these, must, in my Opinion, by the Rule of contraries, serve to direct us as to the *Pruning* of vigorous *Trees*; be it either to do it later, or to leave a greater burthen upon each of them.

It is most certain, that we only have *Fruit-Trees*, in order to have *Fruit*; and it is as

certain, that *Fruit* commonly grows upon those weak *Branches* only; the large ones bear but little, their Function being to perform something else, which is very considerable: Thus great Torrents are not fit to grind, on the contrary, they are apt to choke or stop up a Mill, or to break all; their Function is to serve to other things; for instance, for the Transportation of Travellers, Burthens, Merchandises, &c. So that none but those that are moderate, can be useful for Grinding; So likewise, a *Tree* being very vigorous, generally produces none but large *Branches*, especially at the beginning of the Spring, at which time the *Sap* rises most, and can begin none of those weak ones, which we stand in need of for *Fruit*.

Now to such a *Tree* that must be *Prun'd* in order to yield *Fruit*, and yet retain a pleasing Figure; you must not only leave a great burthen, whether it be as to the number of *Branches*, or the length of every one of them, which is certainly absolutely necessary, but there must be something more: And as it is particularly on those extremities, that the new *Sap* performs most at the entrance of the Spring, it is necessary, as one may say, to let the heat and fury of its first Action discharge it self: And therefore it is fit to *Prune* such a *Tree* later; that is, it must not be done until the first impetuosity of the *Sap* be pass'd; there will yet remain enough in it, to make those kind of *Branches* so *Prun'd*, afterwards shoot out, at the same time, both large *Shoots* for the Figure, and of those small ones which we desire for *Fruit*.

Not but that, as I will shew hereafter, the best Expedient in relation to very vigorous *Trees*; and even, if I may express my self so, obstinate in point of *Fruit*; I say, the best Expedient, is to go to the Source of their Vigour, which are the *Roots*: It is that Vigour which must be weaken'd, and consequently the most working *Roots* diminish'd, and thereby you will diminish the effect which proceeds from several good Labourers; which acting at one and the same time, produce more *Sap* than is requir'd to such a *Fruit-Tree*: For, in fine, that *Tree* must according to our intention, quickly bear *Fruit* in a constrain'd Figure, the which is in no wise Natural to it; which it cannot do, when the *Sap*, being over abundant, produces every where, none but over large *Branches*.

The Experience which every one may acquire in the practice of these two Maxims, and particularly that which relates to the *Pruning* of weak *Trees*; that Experience, I say, will perfectly establish them for ever; and as for other *Trees*, I engage that every body will find a benefit by it; and I affirm, above all things, that it will be a great help to all *Gard'ners*, who are to manage great *Fruit-Gardens*; and who, as it is very much to be wish'd, will *Prune* the greatest part of their *Trees* themselves.

As I am of Opinion, that they can do no better than to follow this Advice, so they appear to me very blame-worthy, if they tarry to the end of Winter, and the time of those decreases of the Moons, of *February* and *March*, to begin to *Prune*; because, that is the greatest time of hurry for all manner of work relating to *Gard'ners*: All comes at once at the entrance of the Spring; the Tillage of the whole *Garden*, the Sowing of most *Kitchen-Plants*, the Budding of *Artichokes*, the making of the different *Beds*, the cleansing of the Walks; so that it is a strange confusion, to have at the same time, the most considerable of all Works to do; for it is the only one, in which no small faults can be committed, they are all considerable and pernicious; it is the *Pruning* of many *Trees*, and perhaps large *Trees*, *Dwarfs* and *Espaliers*, or *Wall-Trees*; without omitting the first palliading of these; and whereas in that case, all things are done in a hurry, so they are commonly ill enough done: For to speak the Truth, every thing requiring an equal haste to be done, there are but few to which a Man can give that time, and application, which they require.

I have said by the by, that I did no ways matter the decrease of the Moon, &c. But I have not answer'd an Objection which some *Gard'ners* pretend to be invincible, and in which, in my Opinion, they are infinitely deceiv'd; it is, say they, That the Winter Frost may spoil the extremities of the *Branch* that is *Prun'd*; and that if it be not to be fear'd so much for *Kernel-Fruit*, yet at least it is very dangerous for *Stone-Fruit*, they pretending that the Wood of those *Trees* is very tender, because it is very pithy; I will only desire those scrupulous Persons, to lay aside that apprehension, and I assure them, that the Experiment they will make of it, without prejudice, will fully cure them of their Error; we have had within these Seven or Eighth Years, the hardest Winters in the Memory of any Living Man. I had *Prun'd* my *Peach-Trees* before that great Cold, and I never found the least inconvenience by it.

I am fully perswaded, that it is late to *Prune* as often as the Cold is not so violent, as personally to prejudice the *Pruner*; there are only certain days of white or hoary Frost, in which the Wood being altogether cover'd with a rime Frost, the *Pruning-knife*, tho' never so sharp, cannot cut through it cleverly; and so, whereas a Man ought to *Prune*

with

with delight; to do it well, 'tis certainly impossible at that time, and therefore it is necessary to defer *Pruning*, until that Frost be altogether melted and gone.

The proper times for *Pruning* being regulated, we must proceed to something more Material and Curious.

As nothing is more creditable and Natural for a Workman, than to know certainly, why, and for what Reason, he does the Work he is employ'd about; so I am perswaded, that nothing can be more stupid, and below a Man, than to Act, barely by Custom, and Habit: It is a fault which is but too common amongst most *Gard'ners*; they seldom *Prune* for any other Reason, than that it is customary. I am convinc'd that there is an indispensable Necessity of knowing something more; without which, it is impossible ever to attain to any perfection in *Pruning*, which in my Opinion is an undeniable Truth: I cannot endure that a *Gard'ner* should be puzzl'd, and almost quite at a loss, when any body desires to know the Reasons of his *Pruning*: And that is the Subject I intend to Treat of in the following Chapter.

## CHAP. IV.

### Of the Reasons that oblige to Prune.

WE have two principal Reasons, which Prescribe and Authorise *Pruning*. The first is, To be sure to have a greater abundance of fine *Fruit*, and *leaves*.

The Second is, To render the *Tree* at all times more agreeable to sight, than it would be, if it were not *Prun'd*: It is undeniable, that it is not only the *Fruit* and *Leaves* that render a *Tree* beautiful: They are indeed its greatest Ornaments, but there is something more requir'd; since the *Fruit* not remaining upon it all the Year round, it were to be wish'd, that when it is strip of those Adornments, or is not yet old enough to have them all; it may at least be compos'd, and shap'd so, as to delight the Eye.

Now that which, besides the importance of *Fruit*, renders a *Tree* pleasing to the Eye, is nothing but the beautiful Figure a skillful *Gard'ner* can give to it: And whereas we have two sorts of *Trees*, upon which particularly we Exercise *Pruning*, to wit *Dwarfs*, and *Wall-Trees*, we must establish good Principles to proceed prudently upon both: Those Principles relate particularly to the thick *Branches*, without which we cannot have beautiful *Dwarfs*; and by means of which it is easie, and even Infallible, to attain to a perfection in it; the whole Mytery of that Operation, shall be discover'd in the Chapters that Treat of the manner of *Pruning Dwarfs*; and *Wall-Trees*, there being no other Rules for the one than for the other.

I say first, That for those two sorts of *Trees*, it must be granted, that their Figures being so opposite the one to the other, the Beauty consequently must needs be so too, therefore I think it will not be amiss, to shew in what, particularly, I fancy, that those two different kind of Beauties may consist.

And perhaps, after that, it will not be improper to compare, in that respect, a good *Gard'ner*, to a skillful *Carver*; For as the latter, conformably to the Idea which fills his Imagination, ought at first sight, to behold in his Marble, the Figure he designs to work out of it, and consequently to behold distinctly in it, the place of every particular Beauty, of which it is to be compos'd.

So an Understanding *Gard'ner*, conformably to the Idea he shall have fram'd to himself of a fine *Tree*, must at a view behold whatever is to be done in any *Tree*, either to beautify it, when it is not so, or to preserve it in its Beauty, when it has acquir'd it; whether it be to render it useful; or, for Example, to see where the *Fruit* shall be, and consequently the *Branches* that shall produce it; to observe the *Branches* that must be taken off, and those that must be preserv'd, to give it an agreeable Figure, &c. And as from time to time, the *Carver* draws back from his Work, to see whether he has perform'd or executed his Thought well; so a skillful *Gard'ner*, in *Pruning* his *Tree*, ought to do the same thing; that is, to draw back from it, from time to time, to see whether he has really hit upon the beautiful Figure he designs to give it.

But before we enter into the explication of that Idea, or Notion of Beauty in *Trees*, it will be necessary to remember, That, as I have said in my Treatise of *Plantations*, we have but few of those that are call'd *Fruit-Trees*, that Naturally remain Low, *Dwarfish*, and, as I may say, *Creeping* enough, either to make regular *Dwarfs*, or yet less, to make *Wall-Trees*: All *Trees*, following the Inclination which Nature has given them, endeavour

to

to rise, and consequently 'tis only the Industry of the *Gard'ners*, who opposing the Course of Nature, hinders them from forming long *Stems*, and from growing Tall.

These *Gard'ners* knowing that, as we have already said, the *Sap* which is to form those *Stems*, lies partly in the *Trees*; much in the same manner, as the water which is to form the Spouts of Water-Works, lies in the Pipes: They have concluded from thence, that if they stopp'd the Passage which carries this *Sap* upwards, which is easie to do, by short'ning the *Stems* of the *Trees*, there wou'd be no further likelihood of its growing to be a *Standard*; and so that *Sap* which is in motion, or strives to get out, without any possibility of being prevented, finding no longer a passage to rise up, as it ought, will discharge it self at the place where its Course has been interrupted, and will produce the same effect there, it would have done higher, had it had the liberty of ascending further; so that this *Sap* springing out of the sides, not only by many *Overtures*, which are already actually form'd there, but likewise by or through others, that it will make it self, proportionably as it is abundant; it will produce to the right and left a pretty considerable quantity of fine *Branches*.

I must now tell you, that if the *Tree* that is shorten'd be Planted in the open Air, it may be dispos'd to make a fine *Dwarf*; and if near any Wall, to make a fine *Wall-Tree*. I have also explain'd in the same *Treatise of Plantations* what is a *Dwarf*, and what a *Wall-Tree*. I have there shew'd what was the Intention of those that first made them, and of what use they may be to us. I have likewise declar'd in it, that when the Walls are high, you must Plant Long Body'd *Trees* to garnish the top of the Wall; and that instead of leaving them there the liberty of forming a round *Tree*, as they wou'd do were they left at liberty, their *Branches* must be constrain'd, like those of the *Trees* that are shorten'd, as we will demonstrate; after having first explain'd wherein the Beauty both of the one and the others does consist; I mean, of *Dwarfs*, and *Wall-Trees*.

## CHAP. V.

### *Of the Idea of Beauty which the Dwarfs Require.*

THE Beauty of *Dwarfs* requires two Conditions, the one in respect to the *Stem*, and the other of the Head: According to the first Condition, *Dwarfs* must be low *Stems*; and according to the second, they must have an open Head, that is, free from thick *Branches* in the middle; it must be round in its Circumference, and equally furnish'd with good *Branches* on the sides.

I will explain more particularly hereafter what I mean by that Opening of the *Middle*, and it shall be in the place where I shall give Directions how to attain to it; but in the mean time a Man must have a right apprehension of the four Conditions of that Figure, and be fully perswaded of it, in order to understand usefully my Maxims of *Pruning*, and grow Skilful in them, in case he approves them so well, as to be willing to Practise them.

I say nothing as yet of the height of the Head of those *Dwarfs*; it depends on the Age of the *Trees*, being low in those that are yet young, and rising in all according as they grow: But as much as is possible, I wou'd not willingly have it exceed Six or Seven Foot: It being better, in my Opinion, that those *Trees* shou'd grow in extent of Circumference, and Breadth, than to let them rise high. The Pleasure of Sight, which dreads whatever Limits it too much, particularly in *Gardens*, besides the Persecution of the Winds, which easily beats down the *Fruit* of High *Trees*, makes me fix to that measure. As the *Pruning* of *Dwarfs* is incomparably more difficult, and consequently contains a great many more Rules than the *Pruning* of *Wall-Trees*. I will begin with that, before I speak of the other.

## CHAP.

## CHAP. VI.

### *Of the Idea of Beauty which Wall-Trees require; together with the Maxims of Pallisading.*

TO advance our *Wall-Trees* to that perfection of Beauty which best becomes them; I am of Opinion, that it must be our particular care, that all the *Branches* of each *Tree*, in spreading over the sides of that part of the Wall which they are to garnish; must be so well stretch'd, and so equally plac'd, both on the right and left; that in their whole extent, taking them from the place, whence they severally proceed, as far as all the extremities of their height and roundness, no part of the *Tree* may appear thinner or fuller than another; in so much, that at first sight, one may distinctly see all the *Branches* that compose it, so far as to be able, to tell them with ease, if so minded: Thinness is the greatest imperfection of *Wall-Trees*, as fullness is the greatest fault of *Dwarfs*; when I say, that I wou'd have my *Wall-Trees* full, I do not mean, that they should be full of ill *Branches*, old, worn, or useless, as a great many ignorant Persons affect to have them; neither on the other hand, in desiring my *Dwarfs* to be open in the middle, wou'd I have them empty, like the inside of a Glass, &c. I do particularly desire all *Gard'ners*, to be very mindful of these two Ideas of Beauty.

As to the Beauty of *Wall-Trees*, it is certainly disagreeable, to see their *Branches* crossing one another, which must be avoided as much as is possible; but whereas thinness, as I have already said, is in my Opinion, the defect the most contrary to the Beauty of those kind of *Trees*, I am for endeavouring to avoid it above all things; so that for that Reason, I will have it allow'd, nay and order'd too, to run them over one another in some occasions, and that particularly it may be allow'd for the great *Branches*, which are alone the foundation of all the Beauty of the *Tree*, to be sometimes drawn over small ones, or the small ones over them, otherwise it would be impossible to avoid the danger of falling into the disagreeable inconvenience of that unlucky Barrenness.

Those little *Branches*, which we may in some manner look upon here, as Temporary *Branches*; are commonly, as we have said, the only ones that must yield *Fruit*, and that is the Reason, why they have been carefully and preciously preserv'd; but whereas, after having given that *Fruit*, they must infallibly perish; they will be soon retrench'd from our *Wall-Trees*, and consequently they will soon supercede the reproach of crossing, they may have drawn upon the *Gard'ner*; and he shall thereby be freed from another reproach, which is much more to be fear'd, and that is the want of *Fruit*.

So then, that crossing must not be us'd, unless there be an absolute necessity; inasmuch that when it can be avoided, I condemn the *Gard'ners*, who, either through Ignorance, or Negligence, have thereby destroy'd the agreeable Symetry their *Wall-Trees* might have had.

And because, that, in the first place, the only way of giving every one of those *Trees* the Beauty, which I have been speaking of, is by means of *Pruning*; and that in the second place, every *Tree* being compos'd of two Parts; of which the one is call'd the *Stock* or *Stem*, and the other the *Branches*; it is certainly upon those two parts, that the *Pruning* is to be perform'd, but yet much more upon the *Branches*, than upon the *Stem*.

And because, that chiefly in *Trees*, there are, as we have said, several kind of *Branches*, very different the one from the other, all having their particular Reasons, either to be taken away, or preserv'd; and among those that are to be preserv'd, some are to be shorten'd, because they are too long, and others to remain whole; so consequently, there must be a great deal of care taken, for the well manning of them both.

I do think my self indispensably oblig'd, to endeavour to unravel, if possible, all the distinctions that are to be made among those *Branches*; or otherwise it will not be possible to understand the Maxims I design to establish for *Pruning* well.

I am of Opinion, that I must take the same Method in this, as People do in Teaching to Read: The First thing, is to learn the Letters of the Alphabet: The Second, how to use those Letters, to joyn two or three together, to form syllables; And, in fine, the Third, to Learn the Union of many Syllables, in order to make whole Words; and these Words following each other afterwards, compose both the Line and Page, &c.

In the same manner, will I first Teach, how to understand well the *Branches* of our *Fruit-Trees*, giving them Names that may express what they are, and then the Use and peculiar Function of each of them; to the end, that several of them, being well plac'd,

may render the *Trees* Beautiful, and dispose them soon to yield abundance of good *Fruit*. Perhaps on the occasion of this Comparison, it would not be improper to say; that as in Reading, Words are only form'd by the Reciprocal Function of the Vowels and Consonants; so our *Trees* only become Beautiful, when they have at one and the same time, a reasonable proportion of *Wood* and *Fruit-Branches*; so that as the Vowels, or Consonants asunder, can form no Words, or Discourse; neither can *Wood*, or *Fruit-Branches* asunder, compose a Beautiful *Fruit-Tree*.

## CHAP. VII.

### *Of Branches in General.*

**R**ightly to understand the Doctrine of *Branches*; Five material Things must be observ'd.

First, That as they compose a considerable part of the *Tree*, they sprout out of two parts of it; some shoot directly out of the main body, and those are the first, and may be stil'd, the Elder, or Mothers; their number is not considerable; the others afterwards are produc'd by these, and are as it were the Daughters of these Mother-Branches: The number of these last is infinite; for successively in their turns, they become every one Mother-Branches, to many others.

It must be noted, in the second place, that from the Body of every *Branch*, when the *Tree* is in a good Case, there yearly grow new ones at the extremities of it; and that more or less, according to the strength or weakness of that *Branch*, which I shall call Mother-Branch, in relation to the new ones it produceth.

In the third place, you must observe that these new *Branches* grow in two different manners; the one in a Regular Order, which is the best, the most common, and most frequent; the others in an Irregular Order, which is the least common, and least frequent.

That Order, which is most common, and the best of the Production of the new *Branches*, when they produce more than one, is, that tho' both the one and the other at the same time issue from the extremities of one that is more Ancient, whether *Prun'd*, or not, they are notwithstanding regularly all of a different thickness, and length; for every one of the highest, are always both thicker and longer than any of those that are immediately under them, drawing nearer to the *Body*: I said, when it produces more than one; for when the Mother-Branch brings forth but one, the Daughter at the end of the Summer proves as large as the Mother, and is very good; when that Mother yields two, that which is grown from the extremity, which I call the first, or highest, is thicker and longer than that which is grown immediately beneath it, which I name the second, or lowest: And in the same manner, when the Mother-Branch produces three, four, five, &c. As the first, that is the highest, is thicker and longer than the second, so the second in the same manner exceeds the third, the third the fourth; and so by degrees, what ever quantity of new *Branches* the Mother-Branch may produce, as it appears by the Figures.

This being granted, it is easie to judge, that the Order which is least Common, and worst in the Production of new *Branches*, is, when the Common Order is inverted, so that there are weak ones in the place where there ought to be thick ones; and that on the contrary, there are large ones, where they ought to be weak, and where perhaps there ought to be none; as it appears by the Figure of *Branches* mark'd with a \*.

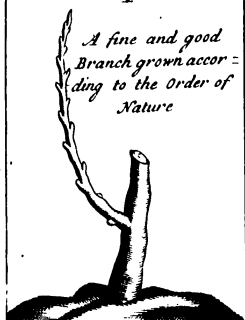
It is not enough to know whence the *Branches* proceed, nor the Order in which they come forth; it is requisite to know, in the fourth place, that as that greater or smaller number of *Branches*, depends upon the force or weakness of the Mother-Branch; I think, that to make my self the better understood, it will be fit to call those strong, which are thick; and to call those weak, which are small; every one of those *Branches* having their Functions Regulated according to their Degrees of Force, or Weakness; so that they seldom inroach upon one another, being wholly apply'd to the discharge of the first Duty which Nature seems to have impos'd upon them, in forming them.

In the fifth place, you must note, and this is the most Material Point; that among all the *Branches*, whether strong or weak; there are some which have the real Character of good, of which a great many must be preserv'd: There are likewise some which have the real Character of bad ones; for which reason, a Name of Reprobation is given them: In regularity, almost all these last ought to be expell'd; let us observe how to distinguish the one certainly from the other.

*Different Situations of the first Branches produced sometimes, by a Tree newly planted*

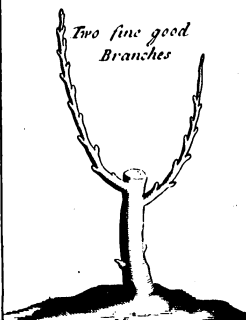
1

*A fine and good Branch grown according to the Order of Nature*



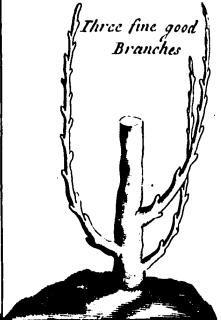
2

*Two fine good Branches*



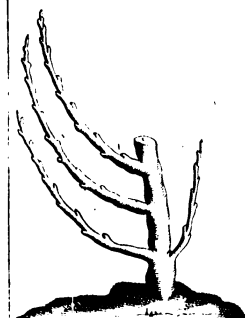
3

*Three fine good Branches*



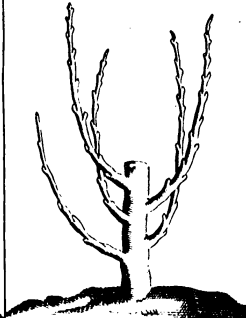
4

*Four fine good Branches*



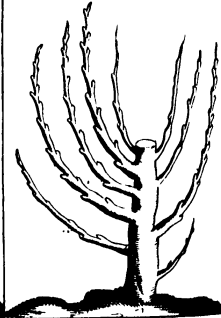
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*Five fine good Branches*

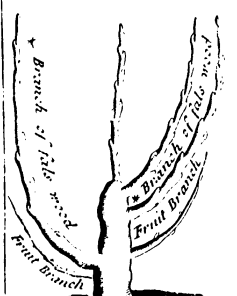


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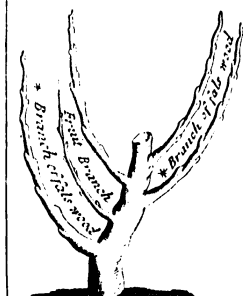
*Four fine thick Branches with some weak ones*



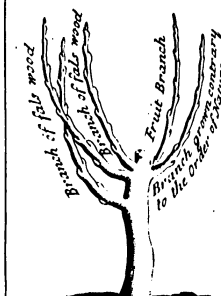
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## CHAP. VIII.

## To know the difference of Good and Ill Branches.

WE have two Certain and Infallible marks in relation to *Fruit-Trees*, certainly to distinguish the good and ill *Branches* from each other, either while they are still upon the *Tree*, or when they are cut off: The one depends upon the difference of their Situation, and Original, and the other from the difference of their *Eyes*, or *Buds*.

I suppose that every body knows that there are *Eyes* upon every *Branch*, which are little knotty places, a little elevated above the rest of the Bark; it is upon those little places that the Leaves are actually fix'd, as they are seen there in the Summer time; or at least some have been fix'd there some time before, which may either have dropt of themselves, or perhaps have been taken off.

What we learn by that difference of Situation, and Original, is first, that the *Branches* to be good, must absolutely, and only proceed from the extremities of those which were remaining upon the *Tree*, at the entrance of the Spring, whether they were form'd in the last year, or some years before; or likewise whether the one and the others have been *Prun'd* as is Customary, or not; as it happens sometimes, for Example, in *Standard-Trees*. In fine, as we only speak here in relation to *Trees* that are liable to *Pruning*, it must be granted, that it is only from the extremity of *Branches*, tho' never so Old, which have been *Prun'd*, at the Season of the last *Pruning*, that the New *Branches* must proceed: In the second place, what we gather from the difference of Situation, and Original of new *Branches*, is, That those *Branches*, to be good, must have been produc'd in the most ordinary and most common Order of Nature, as we have heretofore explain'd it.

From thence two things must be concluded: The first, that any *Branch* which, instead of being grown from the extremity of that which had been form'd the preceding Summer, or at least from the extremity of that which had been taken shorter at the last *Pruning*, proceeds from any other part of the *Tree*, be it either from the *Stem*, or some other Old *Branch*, that had not been *Prun'd*: I say it must be concluded, that such a *Branch*, of whatever size, thick or small, is an ill *Branch*, as I will demonstrate hereafter.

And what must be concluded in the second place, is, That any *Branch* which, instead of being grown in the good order of Nature, being either thicker or longer than that which is immediately beneath it, drawing towards the Superiour Extremity; it must, I say, be concluded that such a *Branch* is likewise nought: It is for those kind of *Branches* that the name of *false wood* has been made, to express that those *Branches* are incapable of performing what we desire; they must be us'd altogether in a different manner from the good ones. We will set down particular Maxims to that effect.

But whereas I do not think it sufficient to have methinks, pretty intelligibly explain'd the difference of *Branches*, by that which is grounded upon the difference of their Situation, and Original; I will moreover explain the other, which is founded upon the difference of their *Eyes*.

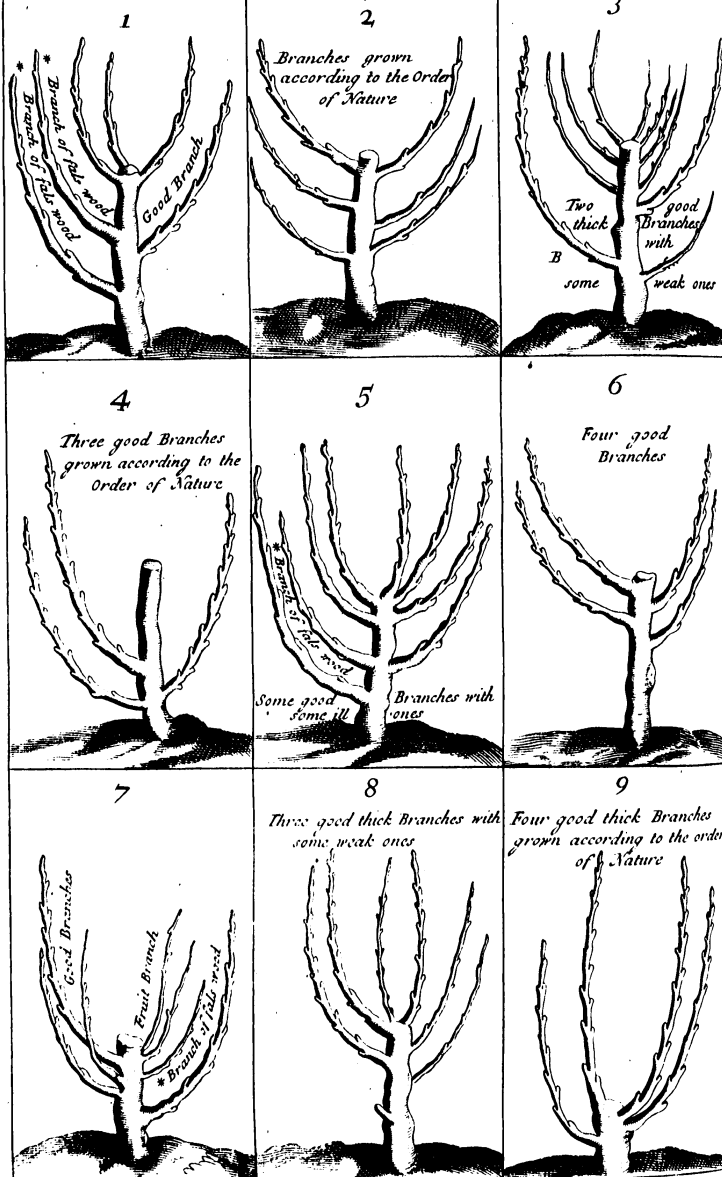
The Mark of the good ones by that difference of *Eyes*, requires that in the whole extent of the *Branch*, the *Eyes* should be thick, and well fed, and very close one to another; whereas the mark of the bad ones by those same *Eyes*, is that in all the lower part of such *Branches* those *Eyes* are flat, ill fed, and hardly form'd, and very distant the one from the other.

These two different Marks, as well by Situations, as by *Eyes*, are easily known in the Figures annex'd herunto A. B. in which the ill ones are mark'd with a \*.

You may see both very good, and very bad ones, as well among the thick and strong ones, as among those that are small and feeble. As to these, their weakness, is sometimes too excessive, that like sapless *Branches*, incapable of bearing *Fruit*, or at least of nourishing and sustaining the weight of their *Fruit*, they must be wholly taken off from our *Fruit-Trees*, and especially from the *Dwarfs*, of which the *Branches* are not tack'd; because that to do well, we must suffer nothing that is not good.

The good weak *Branches*, I mean those which being well plac'd, and of a mean thickness, and length, are as it were proper and certain Instruments to produce Speedy, Beautiful and Good *Fruit*, and are infallibly so, provided the Frost spoils nothing, either while they are in Blossom, or soon after the *Fruit* is knit; for such *Branches* seldom fail of producing Blossom-Buds; and besides, cannot possibly serve to any end but yielding of *Fruit*, unless contrary to the Natural and Common Order of Vegetation, they should happen to have certain overflowsings of Sap to thicken them in an extraordinary manner,

Different Situations of the first Branches produced sometimes by a Tree newly planted



and so alter their Property; that is, convert them into *Branches* for *Wood*; which happens sometimes in all manner of *Trees*, particularly in such as have been ill *Prun'd*: I will explain in the Sequel, what Method is fit to be us'd in such Occasions.

The good strong *Branches*, of which the Principal Use is first to begin, and then continue to give the *Trees* a proper Figure, which they can receive by no other means, are particularly employ'd in producing yearly on their Extremities other good new *Branches*, some strong, and others weak, as it appears by the Figure *A*. And the great Skill of the Gard'ner consists in making a good use of both.

And to that end, as it is material to preserve the good weak ones for *Fruit*, which is the peculiar End of *Fruit-Gardens*, it is likewise very necessary to work prudently to manage our Operations upon the good strong ones: It is true, that it is requisite to preserve on the Extremities of every Old *Branch* some of those new strong ones that are grown there, but that commonly extends but to a small Number; for Example, to one only; and sometimes the Mother-*Branch* being extraordinarily Vigorous, it may extend to two, or three; as I will demonstrate hereafter, in explaining the manner of *Pruning*, for which we must have very good Reasons; for if too many were preserv'd, we should certainly fall into the inconvenience of Confusion, which inconvenience spoils the whole disposition towards *Fruit*, as well as the beauty of the Figure.

There is chiefly a great deal of Skill requir'd to know how to take away entirely all the useless *Branches*, whether it be because they are worn or spent, or because they have no good qualifications; and the same concerning those that are to be preserv'd, to know how to regulate their length proportionably to their Force, and the Vigour of the whole *Tree*; so that afterwards every one of them may be able to produce on its Extremity just as many good *Branches* as are necessary either for the *Fruit*, or for the perfecting the Beauty of the *Tree*, or for preserving it when it is establish'd: And this is what we call the Common *Pruning* of *Trees*.

## CHAP. IX.

### Of the Explication of the Words of Strong and Strength, of Weak and Weakness.

Whereas in this Treatise of *Pruning*, I am of Necessity oblig'd, to make use frequently of the Words of *Strong* and *Strength*, of *Weak* and *Weakness*; which Words bear a double meaning, and therefore might puzzle the Reader; I think it will be proper, before I enter into the particulars of that matter, to give a short Account of the Sense, in which I take and use them; I must omit nothing of what may help me to avoid the ambiguity which those Terms might create in my Maxims. Lest that not being well understood, being Paradoxes, they might not at first meet with all the approbation I could wish them, and hope to procure them in the sequel.

When ever then I speak here, of strong *Branches*, and strong *Roots*; I mean, as I have already hinted, such as are thick; and likewise, speaking of weak *Branches*, I mean such as are small: Moreover, when I speak of a strong *Tree*, I mean a vigorous *Tree*; that is, a *Tree* that produces a great many fine thick *Branches*; and in speaking of a weak *Tree*, I mean a languishing *Tree*; that is, a *Tree* that yields but very few shoots, and for the most part all small.

This being agreed on, and conformably to the Sense, in which the words of *Strong* and *Strength*, of *Weak* and *Weakness*, are commonly taken, when us'd in speaking sometimes of Animals, and sometimes of Timber to Build with, in relation to the burthens they are able to bear.

I say, in speaking of the *Pruning* of *Branches*, that those that are strong must be kept short, I mean those that are thick; and that the weak ones must be kept long, that is, those that are small; and in speaking of the *Pruning* of *Roots*, I prescribe a clean contrary Method from the *Branches*; for we must keep them short, that are weak and small, and those that are thick, strong, and better nourish'd, a little longer; as I explain in the Treatise of the Plantations, in that part where I give directions for preparing *Trees* to Plant.

I likewise call *Apple-Trees*, grafted upon *Paradise-Stocks*, weak *Trees*; as also early *Cherry-Trees*, grafted upon common *Cherry-Stocks*; as I say, that those that are grafted upon free *Stocks*, that is, upon good Wildlings, are strong and vigorous *Trees*; these being

being really capable of producing and bearing a great deal, and the others but very little.

It is likewise in that Sense, that after having regulated of what thickness partly the *Trees* of each kind ought to be, to be proper to be chosen and Planted by a skilful Gard'ner; I say in that Case, observing the difference between the one and the other; that for Example, such a *Pear-Tree*, or such a *Peach-Tree*, in which I find a fitting thickness, is strong enough, and so will be fit to be Planted: I say likewise that another *Tree* of that Kind, being of an excessive thickness, is too strong; and that on the contrary, another of that Kind, in which that necessary thickness is wanting, is too weak: It is likewise in that Sense, that it may truly be said, that the *Trees* which grow slowly, and never grow extream Tall, are the Weakest; witness the *Quince-Tree*, the *Elder*, the *Medlar*, the *Hazzle*, or *Nut-Tree*, the *Paradise Apple-Tree*, &c.

I maintain two things more in the same Sense.

The first is, That care must be taken that the weak *Branch* which is full of *Buds*, be however strong enough to bear the weight of its *Fruit*, because that otherwise, if it be too weak, it will break under it; and therefore I maintain that no more must be left upon each, than in proportion to the strength it may have to bear it.

The second thing I maintain, relates particularly to the *Grafts* that are made Cleft-wise, upon which, when a *Branch*, being small at the time of its *Grafting*, becomes afterwards much thicker than before, methinks that it is hard forbearing to say that it is grown the stronger by it, there being no likelihood of maintaining, on the contrary, that the thicker it is, the weaker it is.

From all I have been saying, to explain the signification of those words *Strong* and *Strength*, *Weak* and *Weakness*, it follows, that they may, according to my sense, be usefully employ'd, and distinctly understood in the Treatise of the *Pruning* of *Trees*.

Now, among these *Trees*, there are some which yearly produce a great quantity of thick *Branches*, and few small ones: There are some that produce a reasonable number of both; and in fine, there are some which grow but little either from Foot, or Head; That is, that produce but few new *Roots* under Ground, and even those all small ones, and but few new *Branches* above ground, and those likewise almost all short and small; which are consequently far from appearing, as they say commonly, Fine, Strong, and Vigorous *Trees*; but, on the contrary, look, if I may express my self so, Sick, and Languishing.

This Production of different *Branches*, is only the Work of Nature, which is perform'd innocently, and without the least dependence on the Reasonings of Philosophy; and tho' this Production has not been the work of the Meditation of Man, yet it has furnish'd him a fair Subject to work upon; so that we pretend to have drawn great Instructions from it, towards the Cultivating and Management of our *Fruit-Gardens*.

Being then certain, that all the Parts, of which all manner of *Trees* are Compos'd, do not receive an equal quantity of *Sap*, since all the *Branches* are not of an equal thickness, and length; I mean, some being considerably thicker, and harder to break, which consequently may be said to be stronger than others their Neighbours: Being likewise certain, that upon the same *Trees*, there are certain *Branches*, which are considerably smaller, and more easie to break, and therefore may be said to be weaker than other Neighbouring ones.

It is moreover certain, as I have heretofore offer'd, and 'tis what I have observ'd (which perhaps few had done before me) I say it is certain, that very seldom *Fruit-Buds* form themselves upon thick and strong *Branches*; so that, for Instance, if a *Pear-Tree* produce none but such, it will commonly bear no *Pears*; whereas, on the contrary, the small and weak *Branches* produce generally a great deal of *Fruit*; insomuch, that if sometimes in one and the same *Tree* all one side appears as it were Pining, in not having produc'd any new *Branches*, or at least but very weak ones: It is observable, that that side grows ordinarily full of *Fruit-buds*, while the other part of the *Tree*, which by the abundance of Fine *Branches* appears very Healthy and Vigorous, produces but very few, and often none at all.

This Observation has put me upon performing two Operations which I have found very successful. The first is, that when a *Fruit-Tree* remains several years without producing hardly any thing besides these kind of *Branches* of an extraordinary thickness and length; and consequently bears but little *Fruit*: In that case I have found no better and readier way to make it fruitful, than by the extraordinary *Pruning* I have mention'd heretofore; that is, by applying my self at the beginning of the Spring to the *Source* or *Spring* of that Force and Vigour, which are the *Roots*, in order to diminish their Action; and to that end I lay open half the Foot of that *Tree*, and wholly take away one or two, and

*Apices curvatos Pomorum pendere ramos.*

*Ut sua quod peperit, vix ferat Arboribus.*

and sometimes more of the thickest and most active *Roots* I meet with, and retrench them so well from the Place where they grow, that there does not remain the least part capable of performing the least Function of a *Root*; by that means I prevent the Luxuriance of the *Sap* for the future, and consequently render the whole Head less Vigorous; whence it follows, that it *Shoots* less of these thick *Branches*, and more small ones, and thus it is dispos'd to bear *Fruit*.

The second Operation is that, when in the Month of *May* a *Branch* shoots out of an extraordinary thickness, either in the ordinary Course of an old Planted *Tree*, or in the first Years of *Grafting*, and that consequently it will be evident that such a *Branch* will be at the same time very long, and have no Disposition to bear *Fruit*; this being grounded upon the Reason of its *Strength*, or Thickness, which proceeds from too great an abundance of *Sap*; in such a case, I am of Opinion, that it is easy for those that are willing so to do; to divide, as I may call it, that Torrent of *Sap*; and whereas instead that its whole Tendency was only to the Production of a thick *Branch*, which for the most part would be of no Use at all, it is easy to reduce it, and as it were oblige it to make several very good ones, whereof one part will be weak for *Fruit*, and others sufficiently thick for *Wood*.

And that is fit to be done in the Month of *May*: Therefore at that time I cause that young thick *Shoot* to be *Pinch'd*, that is broken with the Nail, and leave it no greater length than that of two, three, or four *Eyes* at most.

Hereafter I will explain the manner, and success of such an Operation, after having explain'd what relates to *Pruning*.

But before I enter into the particulars of *Pruning*; I suppose, that we are to *Prune* either young *Trees*, which have never yet felt the *Pruning* Knife; and, for Example, have not been Planted above a Year or two; or Old *Trees*, which have already been *Prun'd* several Years before.

I suppose besides, that these old *Trees* are in a good condition, as having been govern'd by Persons of Understanding, so that they only want being preserv'd; or else that they are in an ill case, either for having always been neglected; that is, not *Prun'd*; or else, for having been ill *Prun'd*; so that it may be necessary to endeavour the correcting of their defects.

I do not really believe, that I may so foresee all the Cases of *Pruning*; as without forgetting one, be able to give Rules for every one that may happen; I am far from being so presumptuous, knowing, that it is almost, in this case, as it is in *Physick*, and in the matter of *Law-Suits*: *Hypocrates* and *Gallen*, with so many *Aphorisms* for the one; *Le Code* and *Le Digeste*, with so many Regulations and Ord'nances for the other, have not been capable of foreseeing and providing against all, nor consequently to decide all, since there daily occur new Cases: All I pretend, is to give you exact Information of the Method I have practis'd for these Thirty Years with an extraordinary application, in which I have been very successful; as well as those who understand it, and who, in imitation of me, do me the Honour to Practise my *Maxims*.

To explain the particulars of this Method, I will divide what I have to say into three *Classes*; and First, in favour of the Curious, who begin to make New *Plantations*, I will speak of *Trees* newly Planted, upon which I will first give General Rules for the well *Pruning* of all the *Shoots*, which every *Tree* shall have produc'd; beginning with those of the first Year, and shall continue in the same manner from Year to Year, for five successive Years, in order to shew the effect of the *Pruning* of every one of these five Years; afterwards I will give other Rules to remedy certain defects, which will happen sometimes, notwithstanding the first cares of a Skillful *Gard'ner*: With all these precautions, and this Method, I have ground to believe, that a *Gard'ner*, who will be tolerably industrious, may be sufficiently instructed in this matter to understand it, to take pleasure in it, and lastly, to perfect himself in it, by his own practice, as much as he shall have occasion for.

After having thus labour'd in favour of the Curious, who have made new *Plantations*, and will manage them themselves; I will proceed to the other Curious, who all on a sudden find themselves Masters of certain *Gardens*, wherein the *Trees* are old; whether those *Trees* have been for a long time well mannag'd, or ill, either through Ignorance or want of Skill; and I will endeavour to make them apprehend what I would do to them, were I to have the manangement of them; This will be particularly of use to all kind of *Gard'ners*, who in all Seasons, casting their Eyes upon any *Trees* whatever, shall not only be desirous to judge of their good or ill Condition to satisfy others; but likewise, shall employ themselves in *Pruning* of them; or at least, to prescribe what should be done to them

for the good of the *Tree*, or the Pleasure and Advantage of the owner : But first, it is necessary, to speak of the Tools that are necessary for *Pruning*, and the manner of using them.

## CHAP. X.

*Of the Tools that are necessary for Pruning, and of the manner of using them.*

I Should not need to say, that in order to *Prune*, either *Branches* or *Roots*, two good Tools are necessarily requir'd, which are a *Pruning Knife* and a *Saw*, because 'tis no Novelty, since every body knows it as well as my self : But whereas, I am not to omit any thing relating to my Subject, I should think my self blame-worthy, if I did not speak of these Instruments.

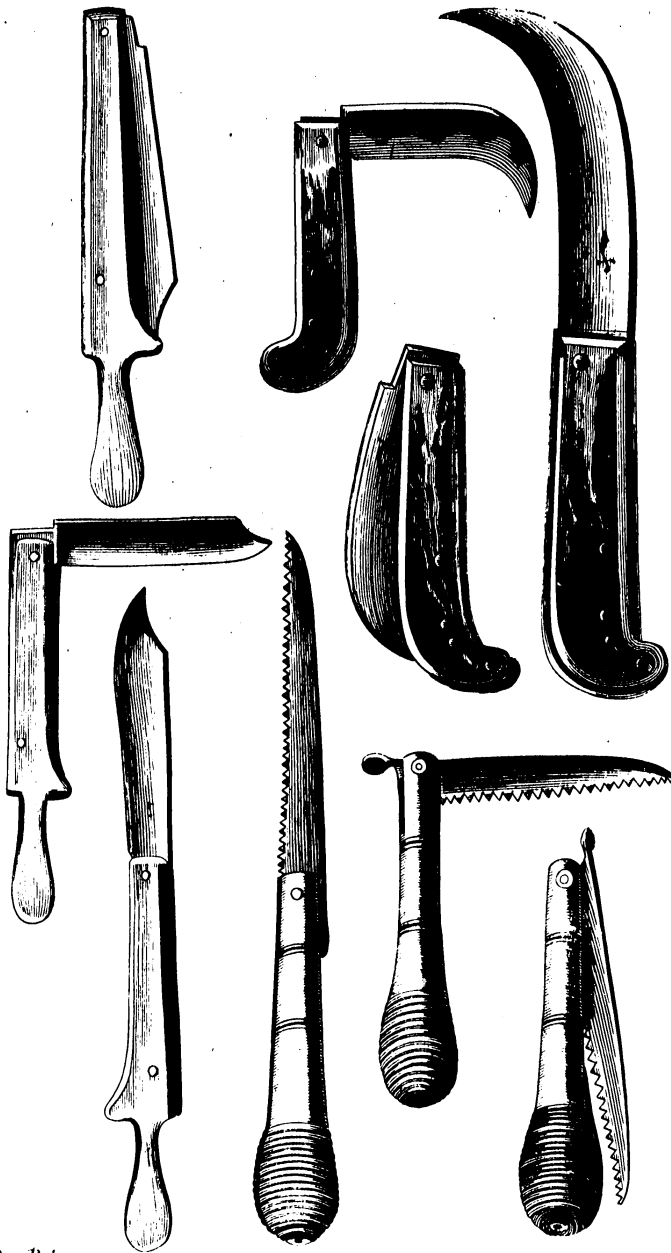
Besides that, as I always aim at rend'ring the work easie, and that I am a mortal Enemy to confusion ; I will destroy certain Portative Shops, which are a large and great Case, stuff up with a multitude of pretty large Tools, and consequently massive and heavy, which *Gard'ners* heretofore only us'd at the time of *Pruning*, and call'd it a *Gard'ner's Budget* : Now instead of all this stuff, I only desire these two little Tools, which may at all times be carry'd in the Pocket, without receiving the least trouble from their bigness or weight ; so that on all occasions, People may not be without something about them, to take away in their Walks, whatever may be judg'd fit to be remov'd ; otherwise it often happens, that certain things remain imperfect, for want of having about one, wherewith to correct it, as soon as it is taken notice of.

I say then, with every body, that the *Saw* serves here, to take off dry and old *Wood*, which is consequently very hard, and capable of spoiling the *Pruning-Knife*, or else to take away that which is ill-plac'd, or so thick, that it cannot easly, and at once be cut off with the *Pruning-Knife*. I say next, that this being granted, the *Pruning-Knife* must of necessity serve to cut off, at one cut, young, lively, tender, and well-plac'd *Wood*, of a moderate thickness ; so that the *Pruning-Knife* must never be us'd upon any thing that would presently blunt its edge, and for which the *Saw* is more proper than it ; nor likewise employ the *Saw* to retrench any *Branches*, which one good cut of the *Pruning-Knife* may cleverly perform.

But it is not sufficient to be agreed upon the Necessity and Use of these two Tools, for the different Occasions in which they are employ'd ; perhaps it will not be useless besides that, to make the description both of the one and the other. I begin by the Figure of the *Pruning-Knives* which I use, and which I look upon as the most convenient ; for they are made several ways which I do not approve of, some being too hooked, in respect to their length, and others not enough ; so that in my Opinion, neither the one nor the other are near so easie to work with, as those which keep a medium between these two Figures ; I have often try'd them of all kinds, and have at last fix'd upon these that are figur'd here, which perhaps are of my own Invention ; at least I have taken a great deal of pains to bring the Workmen to make them exactly according to the Model which I had given them, they still made them too crooked or too streight, and consequently inconvenient ; so that in this Case, the Figure of the *Pruning-Knife* is considerable.

However, it is not enough to have the *Pruning-Knives* well shap'd ; besides that, their matter must be of good temper'd Steel, so that the edge may neither turn, or notch easly ; they must be well whetted, often clean'd from the filth that fastens upon them in working, and set as often as the edge is observ'd not to run smoothly in cutting easly, in proportion to the strength apply'd to them ; and besides, when there are many *Trees* to cut, 'tis fit to have many *Pruning-Knives*, to change them often ; for without doubt, with good Tools, more work is done in one Day, and with more Pleasure, than could be done in two or three, having but indifferent ones, and yet worse having bad ones.

Besides this, the Blade of these *Pruning-Knives* must be of a moderate length, that is, but about two Inches to the part where the bending of the back begins, and afterwards, the whole hooked part to the extremity of the point, must have two Inches more, in so much, that the extent of the outside, must not have above four Inches in all ; besides this, the Handle must be more square than round, and a little rugged : Buck's-Horn is very fit for it ; this Handle must be of a reasonable bigness, so as to fit the hand, and to hold it firm without turning, or slipping out of it, in putting ones strength to it ; the thickness



thickness of two Inches and eight Lines, or at most three Inches, is that which is fit for the use of a Man who actually *Prunes* all manner of *Trees*, that is, to cut here and there some small *Branches*: Such are fit for Gentlemen to have, to cut, as they are walking, such *Branches* as they observe to be ill-plac'd. This is all I can say of the Conditions of a good *Pruning-Knife*.

As for the *Saw*, in my Opinion it does not require so much ado; however its most commendable quality is to be straight: It must be of a very hard Mettal, and well temper'd; old blades of Swords are very fit for it, and the Teeth must be of a good distance, and well open'd, the one turning towards one side, the other on the 'tother, and the back must be very thin, or at least not so thick nor so substantial as the Teeth; otherwise the *Saw* will not move easily, because the Teeth will soon be fill'd up, so that it will soon tire him that uses it, and make the Work advance but little.

It is not necessary that the *Saws* for the common use of *Pruning* shou'd be broad, half an Inch in breadth will suffice, they must not be very long neither, five or six Inches in length will do; and as for the handle it may be round; since it is to be push'd in a straight Line before one, that so its turning in the hand need not be fear'd, as a *Pruning-Knife* with a Round Handle wou'd do. It will be thick enough, provided in that part where it is thickest, which is the Extremity, where the point of the Blade meets when it shuts, it has about two Inches, and seven or eight Lines Circumference; and on the other Extremity, somewhat less than two Inches; and thus one shall have folding-Saws, which may be carry'd in the Pocket as easily as the *Pruning-Knives*, the Blade closing into the Handle, which will be very Convenient, and very Necessary for a *Gard'ner*.

I do not think it a very great matter to have good Tools, but that is not enough, there is some Skill requir'd to use them well, either for the expedition of Business, or to avoid some Accidents. This is a Prentiship which generally costs some blood to those who begin to work, without having had good Directions. There are some necessary Precautions relating to the manner of placing the whole Body well, and particularly of placing the left hand well, without which, a Learner is in great danger of hurting himself; therefore I think it very proper to Instruct him in it at first.

To that end, I say, first, that the Person must be dispos'd and planted near his *Tree*, in such a manner as to stand firm, so as to be able with ease to make use of his Instruments with his full Strength and Vigour: In the second place, he must hold his Tools as firm as can be, that they may not turn in his hand: And, in the third place, as to his *Pruning-Knife*, he must always begin his *Pruning*, that is, to Cut, on that side which is opposite to the Eye, or the *Branch* upon which he cuts, which must after that make the extremity of the *Branch* which is cut: And in fine, whether he cuts to the Right, which is towards home, and is the most common; or whether he cuts with a back hand, as it is often necessary; and proper to be done, he must still take care, and use the precaution of putting his left hand underneath, and close to the place which is to be cut, there to remain as it were fix'd, and to hold the part he grasps so steady that it may not stir or move in the least; and so consequently resist the force of the Right hand in cutting; otherwise if the left hand should quit its hold, the *Pruning-Knife* would no doubt meet with it, and wound it dangerously.

Besides this, that Right hand must be us'd, not only to hold the *Pruning-Knife* so, that the edge may be mov'd Flat-wise, and *Horizontally*, but also use it to stop short after the effort it has exerted in cutting, that you may cut nothing but the *Branch* or *Root* that you intend to Cut, without touching any of the Neighbouring ones, which must so carefully be preserv'd, as neither to be any wise Cut, or Wounded; and therefore before you come to present the *Pruning-Knife*, you must rightly observe the Situation of the Neighbouring *Branches*, and partly consider, not only how the hand must go in Cutting, for that hand in moving must give a certain turn to the *Pruning-Knife*, that the Point may meet with nothing; but you must likewise feel how far the force you must use to carry off at once the part you design to remove may carry you, lest the *Pruning-Knife* in its way might harm some of the Neighbouring *Branches*; and this we call *Cutting Dry*, as it must be done to *Prune* well, that is to Cut cleverly; so that if it be a *Branch*, the Cut may be in some manner round, and flat; at least it must in no wise be long, as Unskillful People do it; and if it happen to be made long-wise, you must make use of your *Pruning-Knife* again, to take away that Deformity; noting however, that it must be done in a different manner from *Roots*, which must be cut absolutely like the Foot of a Hind, that is somewhat long-wise: We have given a Reason for it in the Chapter of *Plantations*.

When by a frequent Exercise, or habit of *Pruning*, a Man is become handy, and bold in Cutting, he may very well, especially in the Case of certain green *Branches*, thick enough to be taken away, I say he may very well place his left hand above the right, to

grasp,

grasp, and gently bend such *Branches* in drawing them towards him; and by that means, such *Branches* will really prove more easy to be Cut; in so much that a Man will often be surpris'd to find so great a *Branch* so easily cut off at one stroke; but then this Left Hand must be at such a distance from the Right, that the great strength he must use to cut at once the *Branch* in question, may not carry it as far as that Left Hand; and it is very necessary to observe, that as in Cutting, the Right hand moves towards the Left, so that likewise should move away from it, in carrying off, as I may call it, the *Booby* which the Right Hand has newly prepar'd for it; or otherwise, as we have already said, that Left Hand wou'd run a great hazard of receiving a dangerous wound, which happens but too often.

Let us say moreover, that in order to Cut well, every *Branch* must be within reach of him that Cuts it; in so much that he may be able to Cut it without straining himself; that is, that such a *Branch* shou'd reach up to the stomach of the *Gard'ner*: If it be much lower, he must be forc'd to stoop so as to put one knee to the ground, if it be needful; and if that *Branch* be too high, he must get upon something, either a Ladder, or Steps, to the end that he may Cut it with ease, and without straining himself; for he would run a great hazard of hurting himself, or of splitting the *Branch* in cutting it downwards: It is not so dangerous to cut upwards; provided, as I have said, the Left Hand be below the Right.

I may say by the by, that *Vine-Leaves* are a Natural Balm to stop the Blood of the Wounds a Man receives in *Pruning*, they take away the Pain, and close up the Wound in a very little time. The tenderest *Leaves* are commonly the best, and for want of green *Leaves*, the old ones may serve: I have formerly Experienc'd that Remedy, and often upon my self; and have always found so much benefit by it, that I willingly advise our New *Vitruo's* to use it upon occasion.

As for the *Saw*, those that are to use it, must, contrary to what is done with the *Pruning-Knife*, as much as possibly can be, place the Left Hand above the Right, and lean hard upon the part which is to be Saw'd, to hinder it from stirring; otherwise the *Saw* would not play well. That done, they must hold the handle of the *Saw* in such a manner that the But-end may not reach above the middle of the Palm of the Hand, and just underneath the Thumb, where it must in some manner be stay'd, or supported, to move the *Saw* the better; in order to which, it is likewise proper that the Fore-Finger should be stretch'd along the Handle, as far as the edge of the Blade, to conduct the motion of the *Saw* the straighter; and to that end, is requir'd, in the first place, a considerable application of the Mind to what is to be Saw'd, without the least distraction by any thing; and at the same time, the *Saw* must be manag'd with an extream quickness and Vigour; for working slowly, or thinking upon any thing else, the Work wou'd not succeed well, and the *Saw* would often bend, or break: You must not Saw quite through, but stop just close to the last Bark, otherwise you might be in danger of tearing the Bark from off the remaining *Branch*, and consequently peel it dangerously; so that the *Pruning-Knife* must always end the work of the *Saw*, both to cut off clean what has not been made an end of Sawing, and to smooth the part that has been Saw'd; that is, to cut off all that remains rough from the Action of Sawing, since otherwise it would hardly recover, the *Saw* having in some manner burnt the part so Saw'd.

There are likewise certain Occasions, in which the Left Hand, by gently bending the *Branch* to be Saw'd, makes the *Saw* play the better; and sooner, and more neatly finishes the Work: But you must be very exact in the strength you use, or apply in bendings, lest you should make a dangerous Slit in the part that is to remain. This is what I had to say, as to our Tools; let us now proceed to the application of the use that is to be made of them.

## CHAP. XI.

### Of the manner of Pruning Trees, in the first year of their being Planted.

A *Fruit-Tree* of what kind soever, *Pear-Tree*, *Apple-Tree*, *Plumb-Tree*, *Peach-Tree*, &c. which seem'd to promise all the good and necessary Qualifications requir'd in order to be Planted, and has actually been Planted with all the Skill and Consideration which we have heretofore explain'd in the Chapter of *Plantations*: This *Fruit-Tree*, I say, from the Month of *March*, until the Months of *September* and *October* following, will of necessity perform one of these four Things; either it will not Shoot at all, or little, or it will Shoot

D

reasonably;

reasonably; that is, at least One Fine Branch, or else it will Shoot much, that is, Two or Three Fine Branches, and perhaps more, as it appears by the Figures. We must exactly Explain what is to be done, in these Four Particulars.

## C H A P. XII.

### Of the first Pruning of a Tree that has not Sprouted at all the first Year.

AS to the first Case, in which we suppose the Tree to have shot forth nothing the first Year, perhaps it may be dead, and appears visibly so; and perhaps it is really dead, tho' it does not seem to be so, by reason of a little Green which the Pruning-Knife discovers under the Bark; for without doubt it may seem alive at the Head, and yet be dead at the Root, and that is likewise call'd being quite dead, without however appearing so outwardly; or else it may seem dead, either because it has produc'd nothing, or perhaps because part of the Stem is really dead, tho' it be, no wise dead in the Principal Place, which is the Place of the Principle of Life, and of the thick Roots, on which depends the whole Spring of Vegetation.

When the Tree is dead on all sides, it is easily known by the dryness, or blackness either of the whole Stem, or a main part of it; especially if that blackness appears about the Graft; in which Case it is neither difficult of giving, nor of receiving good Advice; that is, such a Tree must be remov'd as soon as you are convinc'd of its being Dead, but ever with an intention of putting another in the room of it, at the first moderate Shower of Rain: Provided the death of such a Tree be perceiv'd in the Month of May, or at the beginning of June, 'till which time you may plant others in the room of it; but it is not so safe to be done during the rest of the Summer.

This Re-implacement sufficiently shews, that I design it should be done by means of those Trees which are brought up in Baskets; if, as I have so much exhorted People to do, the Curious have taken care to raise some in that manner, not only in the first year of their Planting, but likewise all the following years; to the end that this first year, and even at all times they may have the satisfaction of seeing their Garden perfectly Stock'd: Without doubt such Basket Trees in the Months of July and August would have shot their Roots beyond the Baskets, in case they had taken so well, as to produce very fine Shoots, which are the only ones you must re-implace, but it is very dangerous to take them out, to Transport or Plant them in the Summer, when their Roots are thus shot out; for they either break in removing, or as their Extremities are White, they easily blacken in a hot Air, and consequently perish; and cause the Tree to pine long, and even often kills it.

But if you do not use Baskets in the Months of May and June, you must stay until the return of the next Season of Planting, which is from November, to the middle of March, and then they may be us'd; or having none, you must Re-plant a new Tree well qualify'd, in the Room of that which is dead.

In the mean time we must carefully examine how we happen'd to be deceiv'd in that Tree, in which we had observ'd all the appearances of a better fortune; since without that it should not have been Planted, to the end that if it be possible to discover or avoid the Inconveniencies that have kill'd it, we may endeavour to remedy it for the future.

For Example, it may be the great Cold during the Winter, which happens but seldom, or else the great Heat during the Summer, which may happen: Then since great Colds, and great Heats are capable of spoiling and ruining the Roots of a Tree, the best way to prevent it is, to cover the Foot of that which is newly Planted with something, for it is an ill Expedient to Plant it deeper than I have said in the Treatise of Plantations, pretending thereby to preserve the Roots from the Cold or Heat: It is better then to Plant it according to our Rules, and take care in the Summer to cover the Foot with Fearn, or dry Dung, or else new drawn Weeds, &c.

If the Tree be dead only for want of watering, the new one must be water'd; if for want of good Mould, you must put some fresh there; if it proceed from having been too often and maliciously shaken or loosen'd at the time of the first Sprouting, it must be prevented, by putting some fence before it, or not suffering the unlucky Wags that have done it, to come near it.

If it proceeds from having been Planted too low, or in too moist a Ground, the other must be Planted a little higher, or else the Ground rais'd to enable it to drain it self.

If it proceeds from having been under the shade of other Trees, or in the Neighborhood of some Wood or Pallisades, which by an Infinity of Roots exhaust all the Ground about them; you must resolve to remove either those Trees that make the Shade, or those that waste the Ground so much; and before you Re-plant any thing in their room, you must remove all the Earth that is worn out, to put better in the room of it, without imagining to better it with Dung, or else resolve to Plant no more Fruit-Trees in that unhappy Place.

If, in fine, some Moles have rais'd and shaken them, you must endeavour to catch them; if the Worms have gnaw'd them, they must be look'd for, and destroy'd; tho' as we have already said elsewhere, it be of all the Evils that may afflict Plantations the greatest, most dangerous, and most incurable: All the Comfort that can be had in this, That it is a kind of Torrent that must of necessity have its Course, but passes, and does not return often; and this is what I have to say as to a Tree which is, and actually appears dead the first year of its being Planted.

If the Tree remain green in the whole Stem, or at least in a great part of it, without having produc'd any thing, and that perhaps it be only a kind of Lethargy, which has in some measure benum'd the Vegetative Faculty, as it happens to some Orange-Trees newly Planted, which remain sometimes two, three, or four years without coming to any thing, and yet at last perform Wonders. 'Tis strange and difficult to apprehend, that the Principle of Life of those kind of Trees, which in effect are so easy to take, and yet are so hard to dye, shou'd not withstanding be so difficult to be mov'd to begin some Roots: But this is not the Point in question here; our Fruit-Trees are not so long without shewing the certainty of their Life or Death.

In case, I say, this Fruit-Tree has preserv'd its greenness all the Summer, without producing any Shoots; it may perhaps give some hope of satisfaction for the time to come, but indeed that hope is very slight; and if it may be done conveniently, the surest way is to replant as soon as can be another new one, that appears better, or at least equally good in the room of it; but if no other can be had, I am still of Opinion that it will be proper in the Month of November to search round about that suspicious Foot, to see whether there appears any good beginning of thick Roots, or none at all.

In the first Case, that is, if any good Signs be discover'd, consisting in the beginning or growing of some thick Roots, which is very extraordinary; for as soon as any new Roots grow in Summer, new Shoots appear at the same time: If then, I say, any beginning of thick Roots be discover'd, which perhaps only began to form themselves since the end of Summer, you must rest there, without doing any thing more, and only cover the Place well again where you have open'd the Ground; and besides, the following Summer take some extraordinary Care from time to time to Water it, if the Ground and the Season seem to require it: Such a Tree may very well make up the time it has lost, and become fine the following years.

In the Second Case, that is when the Tree has perform'd nothing by its Root, it must be wholly taken out of the Ground, and Prun'd again, that is, according to the Term of a Gard'ner, all its Roots must be refresh'd, doing the same to the Head, of which the Extremity may perhaps be dead; and in such a Case it must be refresh'd as far as the quick, and then the Tree may be re-planted at that very time, and in the same place, if it be judg'd worth it, having preserv'd its Roots sound and entire, or you must fling it quite away, if the principal Roots be defective, either in being dry, or black, or being actually rotten, or gnaw'd, as it happens sometimes, for in that Case no good can be expected from them: The Case is different, when there are only some small Roots tainted, tho' it be not a good Sign: but however, in that Case it would be sufficient to Cut them again to the quick, and Re-plant the Tree in the same place where it has given Cause to believe its Destiny doubtful: I have pretty often Re-planted such Trees in Nurseries, where they have thriven so well, that some years after I have successfully given them some of the Chief Places of the Garden, and yet I had Planted very good new Trees in the Places where those could not thrive: It is very difficult to have perfect Plantations without all those necessary Considerations.

The Coolness of a moist Ground is sometimes sufficient to preserve for a year, or more, uncertain signs of Life, both in the Roots and Stem of a Tree, as well as it preserves in Cut Branches, and yet without any certainty of their performing afterwards any happy Operation; that is, to Operate in the same manner as well quality'd Trees use to do; therefore

Vim tamen agrestium metuent pomaria claudii, Inius & accessus prohibet. Idem. Juniperi gravis umbra, nocent & frugibus umbra. Virgil. 10 Ecl. Hortus nullas amat umbras præter umbras domini. Cretencius.

Fundusque mendax Arbore nunc agum cultante, nunc torrens agros Sidera. Horatius

Nec sen're s'rim patitur, bibulique reor-vas radicis fibra labentibus irrigat undas. Ovid.

it is fit to be very nice upon those kind of appearances of Life, by which so many People suffer themselves to be amuz'd and deceiv'd for so many Years. This is, what I had to say upon those appearances of Life, whether Good and Certain, or All and Doubtful.

## CHAP. XIII.

### Of the first Pruning of a Tree that has sprouted weakly.

*Vix unquam  
tand furculus  
proficit nisi  
primo anno vel  
duo proficiat.  
Crescentius.*

I pass now to the second Article of a Tree newly Planted, which is to sprout but little, especially if the Shoot be weak, small, and yellowish, and sometimes accompany'd with some Fruit-Buds.

Upon which I declare, that I have but little more value for that Tree, than for the Preceding, which we have just examin'd, and found it either quite Dead, as well in the Roots, as in the Stem, or only dead as to the Roots, tho' it appear'd green at the Bark; or else have found it to have yet some small signs of Life in the Roots, as well as in the Stem; both these, and the others, having still preserv'd some signs of Life; that is, some green, and a little Sap. Therefore when I am furnish'd with good Trees, I never fail rejecting this, altho' it has sprouted a little, as well as the preceding which has not sprouted at all: But when I find my self in want, or unprovided, I am contented with cutting these little Shoots close to the Stem, shortening that above by the half; and besides, I never fail to search the Foot; and if I find that the Roots have Shot nothing, as it happens sometime, I pluck up the Tree quite, and refresh the Roots, to see if they are all found; which being so, I plant them again, or else some of the Principals being spoil'd, I fling it away.

If in order to Replant such a Tree, I fear the Earth be not good enough, I put better in the room of it, this is the only good expedient to be us'd; the help of Dung being too uncertain and deceitful to rely upon it: In fine, I do the same thing to this Tree, as I do either to that, which did nothing, but remain'd Green both at the Head and Roots, which we Prun'd anew every where, and afterwards Replanted, either in the Garden, or in the Nursery; or else like the other, whose Head is really in a pretty good Condition, that is Green; but yet has its principal Roots entirely spoil'd, which, upon that account, we have rejected as dead therefore I ev'n look for a new Tree, to put in the room of that, which, as it were, only seem'd to sprout, such little Shoots being properly but false marks of its having taken new Roots, they being only produc'd by the effect of Rarefaction, and without the help of the Roots, as I explain elsewhere.

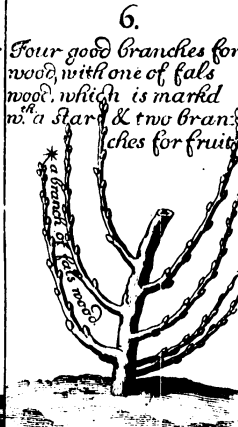
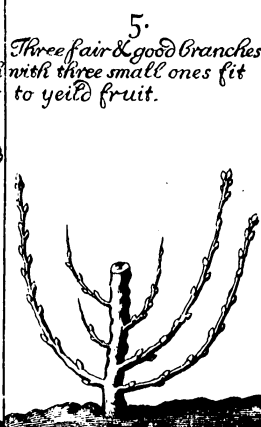
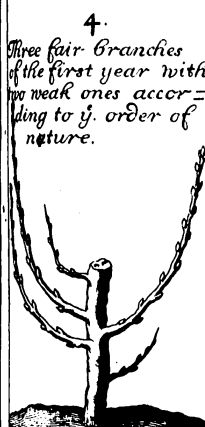
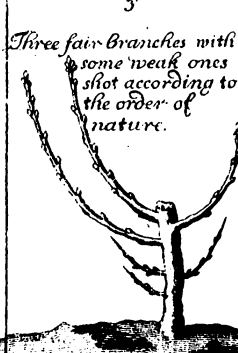
That pitiful Fruit-Bud, which appears upon the languishing Head of that Tree newly Planted, far from producing in me the effect it operates upon so many Philosophers; that is, from raising any joy in me, or giving me the least Consideration, either for the Father that has brought it to light, or for the Action by which it is produc'd, creates in me on the contrary, a real scorn for both; which confirming me in the Maxims I have advanc'd, to prove that Fruits are only marks of weakness, puts me upon the resolution of forsaking that Tree, and to fling it away like a piece of dead or useless Wood: This I do not only to low Trees, that are to make Dwarfs, or part of the Wall-Trees, but likewise to Standards, both the one and the other being a-like, in respect to their taking new Root.

I will say here by the by, that this despicable Bud, which I think I may call a Bud of Poverty, has rais'd a War between some Philosophers and I, because I will not grant them, that the Production of it is a sign of Vigour in the Tree, as commonly the Generation of Animals, is a mark of it in the Fathers.

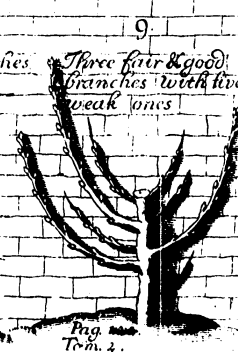
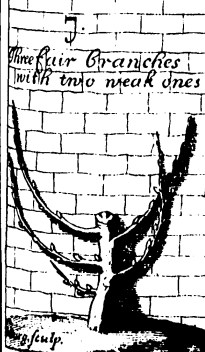
I explain this matter more at large in my Reflections, not having thought it proper to proceed any further here upon the Reasonings I have had cause to make upon it, comfortably to a thousand irreproachable Experiences.

## CHAP.

### The Different Situations of the first branches which a tree newly Planted sometimes makes.



### Espaliers or Wall-fruit-Trees.



Page 20  
To the 2.

## C H A P. XIV.

*Of the first Pruning of a Tree, that has at least produc'd one fine Branch.*

WE must now proceed to the Third Article, which relates to our low *Trees*, newly Planted, either for a *Dwarf*, or *Wall-Tree*, and declare what we are to do if they Sprout reasonably; that is, at least one Beautiful, and sufficiently thick *Branch*, which is commonly attended with some weak ones.

In that case, we are to make *Three* particular Considerations, *viz.* Whether that fine *Branch* proceeds from the extremity of the *Stem*, the middle, or the lower part.

If altogether from the extremity, out of the fear of falling into the inconvenience I dread, which is a defect for a *Dwarf*, that is, its growing too high in the *Stem*, into which inconvenience I should undoubtedly fall; if I perform'd my *Pruning* upon that new *Shoot*, I rather resolve to shorten the *Stem* of that young *Tree* about an Inch or two, and so put it back to the *A. B. C.* Being certain, that round the extremity where I shall lower it, it will produce fine new *Branches*, all well plac'd, and in a sufficient Number; and this is grounded upon that fine *Shoot* it has produc'd, which convinces me fully, that it has shot forth good *Roots*.

Thus in putting back perhaps the Pleasure of a Year, because I run the hazard of having my *Fruit* somewhat later; I avoid the dissatisfaction of having a *Tree* tile too high, as it would do, if I permitted it wholly to *Shoot* out of that *Branch*, which would offend me perpetually, whereas in taking it a little lower, I put it in a way of appearing with all the advantage that can be desir'd in a well order'd *Tree*; and consequently I put it in a condition of rewarding me yet better, as well by a fine Figure, as by the pleasure of a-bundance of *Fruit*.

But if the fine *Branch* shoot out of the middle of the *Stem*, you must without hesitation cut down the *Stem* to that *Branch*, and even shorten that *Branch* within the compass of four or five Eyes at most, therein to place the whole foundation, and all the hope of a Beautiful figure in your *Tree*; it being certain, that at the place where you have shorten'd it, it will produce in the second Year at least two fine *Branches*, opposite to each other: This is sufficient to make a fine *Tree*, for those who know how to order it well; but if that shorten'd *Branch* shoots forth three or four, as it happens pretty often, the success will still be the more favourable, easie, and agreeable.

I suppose still, that the *Gard'ners* who are any thing careful, will have taken care to order that only *Branch* we speak of, in such a manner, that it may be very upright, in order to form a straight *Tree* upon its Center, as it is necessary it should be.

If they have been wanting as to that Precaution, they must have recourse to the grand Remedy, which is, to shorten that *Branch* within the compass of two or three Eyes, which rough Treatment had not been necessary, had it been well rear'd up from the beginning.

In *Pruning* that *Branch*, which is come here by its self, one may still preserve, not the very small *Branches* which I call *Sappests*, and must be utterly exterminated from our new planted *Tree*; but only some of those that are either short, or passably thick, or longish, and likewise passably thick, in whatever place either of them may be; provided they have pretty good *Eyes*, and are well plac'd, we may securely expect to have soon *Fruit* upon them, without fearing it might prejudice the vigour of our *Tree*, especially in stone *Fruit*, and even in Kernel *Fruit*, taking care however to shorten those *Branches* a little, which are really too long, without meddling with the others that are short and passably thick.

The Reason why I do not hinder the preserving of some of those weak *Branches*, is, that being very certain, as I have so often repeated, that it is the small quantity of *Sap* which produces the *Fruit*, it follows from thence, that the little *Sap* that goes towards the making of it, cannot considerably prejudice our new *Tree*, and yet it will afford us a great deal of Pleasure in giving us *Fruit* betimes.

It is not that I think it a great fault, the first Year, unmercifully to take away all those hopes of the *First Fruits*: The Curious may do in this as they think fit, but for my part, I preserve them.

If our only *Branch* shoots out of the lower part of the *Stem*, we have Reason to rejoice at it, it is very well plac'd, provided the *Gard'ner* has taken care of it betimes, to keep

it upright, in case it were not so, as we have said of the Preceding: We may with assurance *Prune* it the height we desire it at, to begin a *Fine Tree*, whether it be a *Dwarf*, or *Wall-Tree*; but if it prove not straight, or without a probability of being straightened by some strong *Ligature*, it must be us'd like the other, that is, it must be shorten'd quite low to make it produce another that may be straight, otherwise the *Tree* would always be a-wry, and consequently of an ill Figure, still remembering that the *Stem* must be shorten'd close to the single *Branch* it has produc'd, and we have *Prun'd*.

I will say here, by the by, that when we Plant a *Tree*, we may according to appearances, but not demonstratively and infallibly assure that it will take *Root*: Yet less, in case it do's, can we assign in what part it will produce its first *Shoot*: But as for the *Fine Branches* produc'd by a *Tree* that has taken *Root*, which we have afterwards *Prun'd*, we may with some certainty affirm, that they will produce New ones on the Extremities on them which we have shorten'd, and partly guess at the quantity; so that this may be rely'd upon; and consequently if our *Tree* has only produc'd the single *Branch* we speak of, we may with certainty expect that being *Prun'd* somewhat short, it will at least shoot two fine ones, capable of performing in all respects what we have above establish'd for the beginning of the Beautiful Figure of a *Tree*.

I fancy then, that as to this *Branch* shot from the lower part of our *Stem*, we may partly allow it the same length we had allow'd that *Stem* in Planting the *Tree*, that is, about seven or eight Inches long, what ever place we have Planted it in, whether in Cold, or Moist Ground, or Hot, and Dry.

## CHAP. XV.

### Of the first Pruning of a Tree that has produc'd more than one Fine Branch.

AS to the Fourth Case, in which our new Planted *Tree* has produc'd two *Fine Branches*, or three, or four, or more, with some weak ones among them.

We are to make other great Considerations upon them, which will engage us into different Chapters, *Viz.* In the first place, to know whether that Plurality of *Branches* be produc'd to ones liking; That is, whether they grow round about some part of the *Stem*, whether at the top, in the middle, or in the lower part; so that they may grow like a *Branch-Candlestick*, for a *Dwarf*, or like a *Hand spread open* for a *Wall-Tree*.

To know, in the second place, whether all those *Branches* are grown on one side, and all over one another.

Or whether in Degrees at a great distance from each other, tho' round about the *Stem*, or if sometimes they are all grown from one and the same *Eye*, and likewise whether it be on the top, middle, or lower part of the *Stem*.

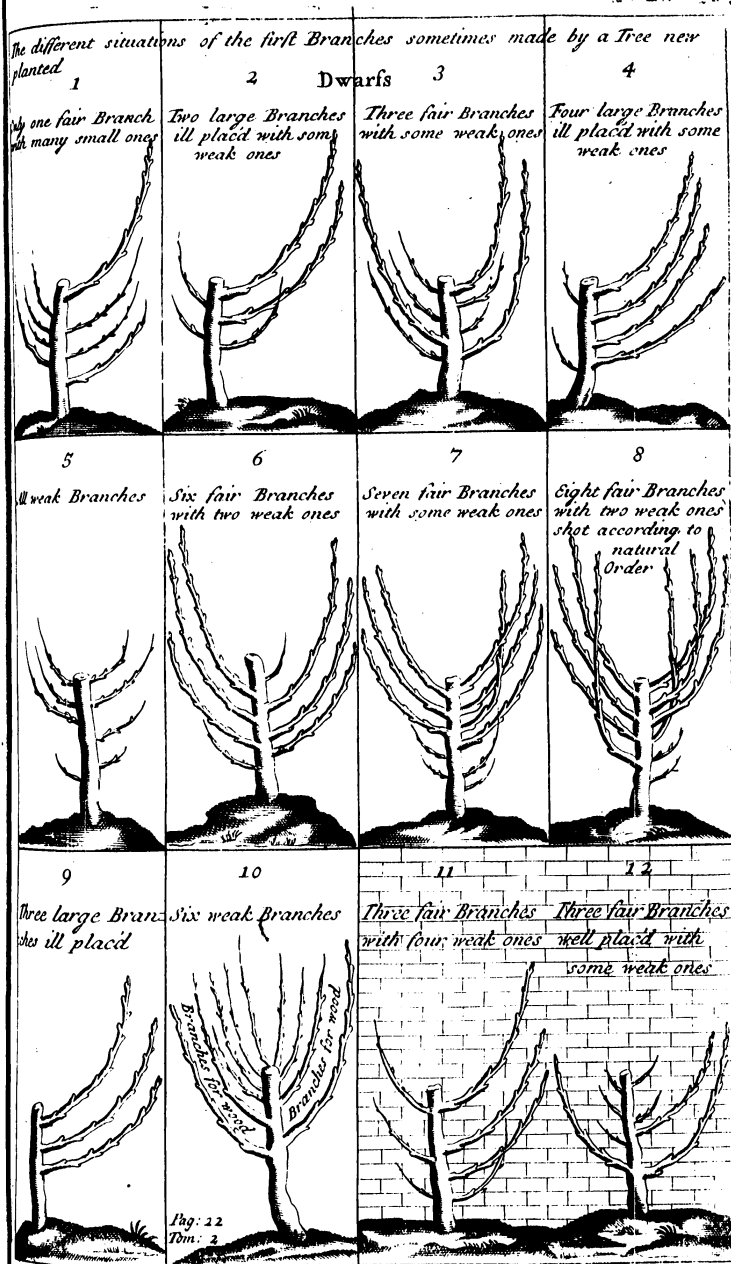
Lastly, to know whether all those *Branches* of themselves are dispos'd to open and spread, or all of them to keep close together in a confus'd manner.

These are almost all the different ways in which the first short *Shoots* of every *Tree* newly Planted form themselves, when it is so happy as to take *Root* again, as it appears by the Figures hereunto annex'd.

I repeat again, that I do not Consider here, as any thing Considerable, the little small *Branches*, altho' they should be good to produce *Fruit* the very next year, which is often true in *Stone Fruit*, but seldom in *Kernel Fruit*: Woe to that *Tree*, what ever it be, which produces many of these, or no others; however, I will say what is fit to be done to them, after having ended the most material part of my Work.

They are only the great *Branches* I value in this Case, desiring to have a fine and good *Tree*; these, in respect to this, have been the first Object of my Wishes, and the only ones that can serve for the first foundation of my *Tree*, that is, in case they be Naturally well plac'd, and I can give them a *Pruning* proper for my Intention, and for the Beauty of the *Tree* I am to manage.

For as the first *Branches*, tho' happy in their Original, may very well be ill order'd, and consequently give an ill beginning to a *Tree*, being handled by an Unskilful Hand; so likewise tho' those first *Branches*, at their first Sprouting, might happen to be found in a defective Situation, may very well with a little time, and good discipline be, as I have said, so Skilfully turn'd, that the defect of their Birth may not hinder them from being Mothers to a Well-shap'd, and Sightly *Tree*.



The first Caution I am to give here, is, that commonly all the thick *Branches* which grow the first year upon new *Trees*, are those we call *Branches* of false *Wood*, their *Eyes* discover it; and therefore must be Treated accordingly by *Pruning*, and even the weak and slender ones are commonly in that respect of the same Form with the thick ones, unless they did remain very short.

The second Advertisement, is, that the first *Pruning* I perform upon the thick *Branches* of New *Dwarfs*, differs but little from that I use the first year upon New *Wall-Trees*: It is true, that in these I easily constrain the most obstinate *Branches*, that is the worst grown, to put themselves into the Posture I desire, to attain the Beauty requir'd in a *Wall-Tree*; it serves likewise to afford me more *Fruit*, and finer; it is likewise true, that *Dwarfs* are, if that Expression may be us'd, a kind of half *Volunteers*, which indeed do part of what they have a mind to themselves; but yet commonly suffer themselves at the same time, to be conducted by my Industry, as well for the satisfaction of my *Eyes*, as for the delight of my *Pallate*: Only the *Fruit-Branches* can not be left so long upon *Dwarfs*, as upon *Wall-Trees*, because in those we have the Convenience of *Tacking* and *Propping*, which we have not in others.

## CHAP. XVI.

### *Of the First Pruning of a Tree that has produc'd two Fine Branches, and both well Plac'd.*

AS for what relates then to this Fourth Case, in which a *Tree* newly Planted has happily and vigorously produc'd more than one fine *Branch*, with some weak ones among them: If, for instance, it has on the top of the *Stem* two almost equally strong, and well plac'd, that is one on one side, and another on the other, nothing can hardly be desir'd better, it is a very fair beginning to make a Fine *Tree*: The only thing in question is, to shorten them all equally within the compass of five or six Inches in length: But above all, you must take care that the two last *Eyes* of the Extremity of each of these *Branches* so shorten'd, look on the Right, and on the Left, upon the two bare sides, to the end, that each of them producing at least two new ones, these four may be so well plac'd, that they may be all preserv'd; and in order to that, if it be a *Dwarf*, they must all contribute to form the thin Round which we desire; and if it be a *Wall-Tree*, to form the flat and full Round, which we likewise design.

It would be ill *Pruning*, if those two last *Eyes* look'd, for Example, either on the inside of the *Dwarf* to begin to fill it, or the outside to begin to open too much; it being first requir'd well to establish the first Beauty of the Figure of that *Tree*, which is to open in a Round equally garnish'd: For the same Reason, in relation to the *Wall-Tree*, the *Pruning* would not be sufficiently well perform'd, unless it were order'd so, that the two *Eyes* that are to be found on the Extremities of the two *Branches* that are to be shorten'd, should cast upon opposite sides the New *Branches* they are able to produce; for it is necessary that those very *Branches* should have of themselves, and without the least violence a Natural disposition to place themselves well upon those parts of the Wall that we would cover, to the end that they may all be preserv'd; and so the first Vigorous *Branches* of that *Wall-Tree* have perform'd their duty, as well as the first Vigorous ones of the first *Dwarf* will have done theirs: However, it will still be fitting to have such necessary regards both towards the one and the other, as may tend first, and chiefly, to a Roundness, which must be continu'd to that end, until the Round be almost perfect, and then we must begin to have two other Prospects to dwell upon; of which, the one is, to endeavour by all possible means to give a reasonable opening to that *Tree*, if it be a *Dwarf*, having already attain'd its roundness; and to fill it equally throughout its whole extent, if it be a *Wall-Tree*, likewise having its roundness: The other Prospect is, to preserve in both that Round which is already form'd, and must yearly grow in Circumference, without ever, as much as in us lies, suffering it to lose any thing of the Beauty of its Figure.

A particular Care must be taken, that if one of those two *Branches* has any advantage in thickness over the other, so that likely the one may well produce two other thick ones, while his Neighbour can yield but one; in such a Case, I say, care must be taken, that as well the two of the thickest, as the single one of that which is not so thick, may come forth so happily, that all three together may be preserv'd as fit and necessary for the Completing of the Beautiful Figure in question: Otherwise, if there should be a necessity of removing

removing some, because ill-favourably grown, it would prove a vexatious Loss, both in respect to the Tree, and Gard'ner. It is necessary to say here, that if, in these two kind of Trees in debate, a Fruit-Branch shou'd chance to be join'd to the two Wood-Branches, it may be preserv'd without any Consequence.

## CHAP. XVII.

*Of the first Pruning of a Tree that has only produc'd two Branches, both beautiful and thick, yet both ill-plac'd.*

IF one of those first fine Branches the Tree has produc'd, be considerably lower than the other, or perhaps both on the same side; or may be the one on one side on the top of the Extremity, and the other quite at the bottom of the opposite side; in that Case, I say, you must fiercely and unmercifully resolve to preserve but one, and chuse the fittest to begin a fine Figure; and consequently, you must cut off the other so close, that, in all probability, it may never be able to produce any thick ones in the same place; it being most certain, that if both were preserv'd, it cou'd never form a Tree of an agreeable Figure, the sight of which wou'd continually vex you, for not having order'd it well from its Infancy. The Ignorant perhaps may imagine, that this wou'd occasion the loss of a Year; but I can assure them of the contrary, if they will confide in me. In this Case then you must take down the Tree to the lowest branch, if you design to preserve that, which, indeed, is the most proper for our Design, and an infallible Means not to fear any other Branch ill-plac'd on that side: Or, if you must take off the lowest, as not being fit to contribute to the Beauty of the Tree, it must be cut within the thickness of a Crown-piece; for there seldom arises a necessity of cutting a thick new Branch, being ill-plac'd so close, that nothing at all may grow from it. I explain this sort of Pruning, together with that which is to be perform'd sloping, more at large in the 21. Chapter.

That Pruning within the thickness of a Crown-piece, will either produce nothing, or only weak Branches, which, far from spoiling any thing, will be fit to be preserv'd for Fruit. This way of Pruning supposes the Branch to be thick and vigorous; for had it been a moderate one, it must have been preserv'd entire, as a Fruit-Branch; if very thin, it must have been cut so close to the Stem, that no passage had remain'd for any thing new; and that particularly, it being very ill-plac'd, or the Tree having but a moderate Vigour.

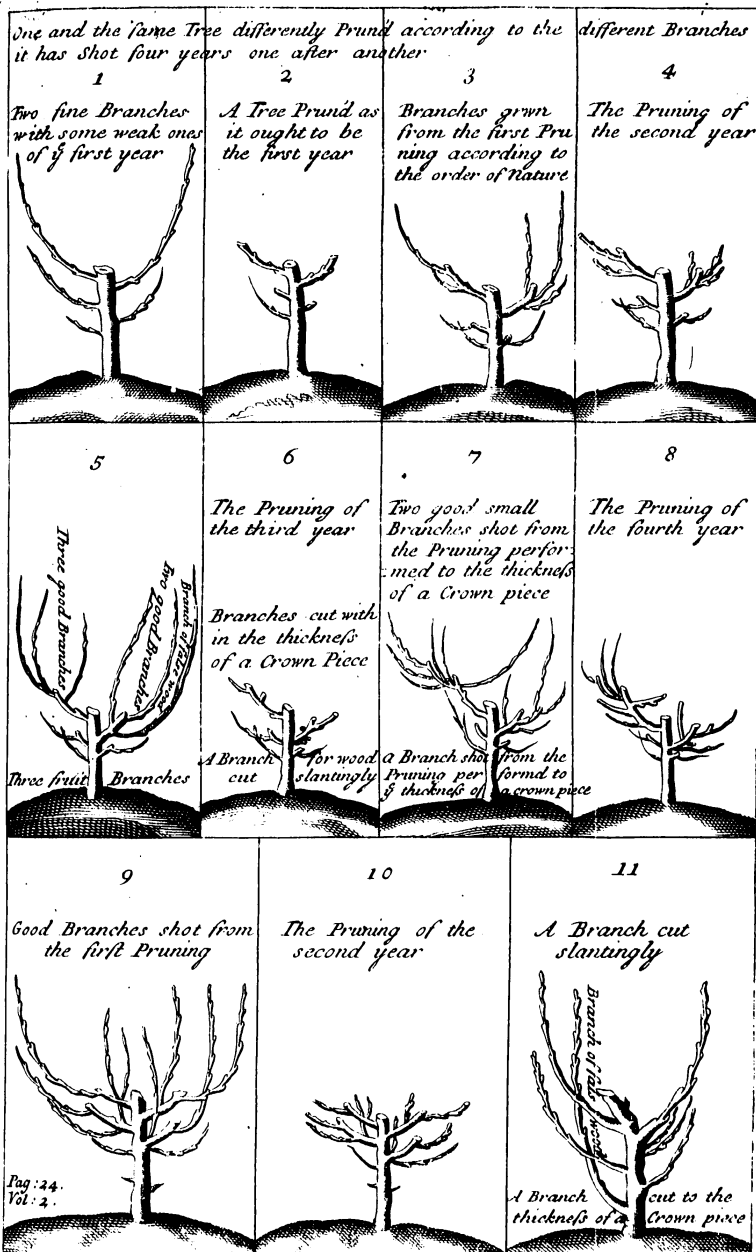
This Case of a single Branch, which has been preserv'd, and must be prun'd, reduces it self to another heretofore explain'd, where our Tree at first produc'd but one fine Branch; and consequently, in order to the Pruning of this, you must follow the Method prescrib'd for the other, which is useless to repeat here.

It happens sometimes, that from one and the same Eye of a Tree newly planted, two fair Branches may proceed, without any others from any other part. In such a Case, they may both be preserv'd very well, whatever part of the Stems they are in; that is, if they are likely to serve to form a beautiful Figure, as it is possible, if the Vigour of the For, or the Care of the Gard'ner, have made them shoot straight upwards: But if either of them cannot serve towards that Figure, it will be necessary to take it away, and be contented with that, of which a good use may be made; and that must be order'd according to the foregoing Method upon that Subject.

## CHAP. XVIII.

*Of the first Pruning of a Tree that has produc'd three or four fine Branches, well, or ill-plac'd.*

IF our Tree has produc'd three or four fine, well-plac'd Branches, or else three or four ill-plac'd ones, and that all on the Extremity, or a little beneath it. In the first of these Cases, we suppose that the three or four Branches are grown on the Extremity of the Stem, and in a proper place to form at first a fine Tree: In that Case, I say, they must, for the first time, be prun'd with all the same Regards we have explain'd for



for the *Pruning* of the two first which were by themselves, and likewise well plac'd. In case these three or four be partly all of an equal thickness, they must all be us'd alike: If one or two of them should be somewhat less in thickness, but still fit to be *Wood-Branches*, or at least half *Wood*, and consequently capable of contributing to the Beauty of the Figure; in that Case those shall only be *prun'd*, with a prospect of getting one only new *Branch* from them, taking care at the same time to have it on that side which shall be found the most empty; and to that end, they must be shorten'd to an *Eye* that looks on that side; and Care must be likewise taken, that the two last *Eyes* of the others, which are stronger, may look towards the two opposite Sides, in order to begin to fill them up the more.

But if those three or four fine *Branches* shoot out a little below the Extremity, 'tis but shortning the *Stem* to them, and then do what I have been saying, when the *Branches* did at first shoot out from the top of the *Stem*.

In the second Case, where we suppose that the *Branches* produc'd, are most of them ill plac'd, inasmuch that they cannot all conduce towards the forming a fine *Tree*, and consequently cannot all be preserv'd, you must examine whether, among the three or four, there are not at least two pretty well situated; that is, the one on one side, and the other on the other, and whether the Degrees are not too distant to permit you to frame upon those some Foundation for your Figure; and that being so, those may very well satisfy you, cutting off the others within the thickness of a Crown-piece, as we have heretofore establish'd.

The two that are preserv'd, must be *Prun'd* with the same Regards heretofore explain'd for the *Pruning* of the two fine *Branches*, whether we have them by Choice, or by the good fortune of *Vegetation*; which having given but two, has given them in such a Situation as could be desir'd; and Care must be taken, that these two being *Prun'd*, they may be found afterwards of an equal height, though of a different length, to the end that those that may shoot from them may begin our Figure happily; for after that, it will be easie to go on with what has been so well begun.

I do not repeat what is to be done to the good weak *Branches*, having, in my Opinion, sufficiently observ'd, that they must be carefully preserv'd for *Fruit*, only shortning them a little on the Extremity, when they appear too weak for their length; not failing to take away the sapless ones, whatever quantity there be of them.

## CHAP. XIX.

### Of the Pruning of Trees that have produc'd to the Number of five, six, or seven fine Branches.

IN fine, our new *Planted Tree* may, as it happens sometimes in good *Grounds*, and particularly on fine *Trees*, that have been *Planted* with all necessary Regards, whether they be *grafted* upon *Tree-Stocks*, or upon *Quince*, I say, it may have produc'd to the number of five, six, or seven fine *Branches*, and even more. It wou'd be a good Fortune if they shou'd be all so happily plac'd, that they might be all preserv'd, without causing any Confusion, as I have met with it sometimes; by which means it is easie to have soon a fine and good *Tree*. But as it is a Rarity to find them all well plac'd, I am of opinion, that it will be sufficient to preserve three or four of those, that a skillful *Gard'ner* shall judge, both by their situation and strength, to be the fittest for the Execution of our Design, and so *Prune* them, as we have explain'd in such a Case. This being so, he must wholly cut off all the others, if they happen to be higher than those that are preserv'd, especially if they be thick; for if they are weak, that is, fit for *Fruit-Branches*, he will do well to preserve them until they have perform'd what they are capable of doing.

In case then there be a necessity of taking away some of those highest that are thick, they must either be cut off *Stump-wise*, to amuse a little *Sap* in them during two or three Years, or else the *Stem* must be shorten'd to them that are preserv'd; especially, the *Tree* not being very vigorous. But if there happen to be some thick ones lower than those which we preserve for ever, it is likewise convenient to preserve those low ones for a while, provided they spoil nothing in the Figure; because that for the space of two or three Years, they employ a little of that *Sap*, the Abundance of which is prejudicial to us, both to compass *Fruit*, and to arrive at a beautiful Figure. But if such low *Branches* can annoy us, then, as we have already said, they must be cut within the

thickness of a Crown-piece, or else take them off close, when we find but a moderate Vigour in the Foot of the Tree.

I still forewarn, that if, among the thick ones, there chance to be a great many weak ones, you must be contented with two or three of those that are best plac'd, and best condition'd, breaking off the Extremity of the longest a little, and not meddling with those that are naturally short, and passably thick; and consequently, you must wholly take away the others, which would only cause a Confusion.

This, in my Opinion, is all that can be done for the first *Pruning of Trees*; I mean, for the *Pruning of the first Branches* they shall have produc'd, in the place where they have been newly Planted.

## CHAP. XX.

### *Of the Second Pruning, which is to be perform'd the Third Year on a New Planted Tree.*

THE first *Pruning* of those New Planted Trees being perform'd, and that upon the first Shoots they have produc'd the first Year of their being Planted, we now must shew the Success it ought apparently to produce, and what Conduct is to be held the following Year for the second *Pruning*; I mean, for the *Pruning of the Twigs*, that shall shoot from the Extremity of those that have been *Prun'd* the Year before: And to that End, I think it will be proper to follow the same Order I have establish'd for the first; that is, for the *Pruning of the first Shoots* they had produc'd.

But before I come to that, let us consider what is to be done to the Trees which had not succeeded well the first Year.

If the *Fruit-Tree*, which, without having produc'd any Branches the first Year, has been preserv'd, in hopes that, having still been green, and consequently alive, it might do better the second; I say, if that Tree does not begin betimes, that is, even in the Month of April, to shoot very vigorously, it is an infallible Sign, that it will never be good for any thing; and therefore, without losing any more Time, it must be thrown away, and one of those that shall have been brought up in Baskets, in order to supply such Accidents, plac'd in the room of it.

And likewise, if the Tree, which having only produc'd small Shoots in the first Year, has been preserv'd, the Stem of it being only shorten'd; if that Tree, I say, does not, at the very Entrance of the Spring, begin to shoot fine new Branches, I am also of Opinion that it shou'd, without any hesitation, be us'd in the same manner with the foregoing, we have been speaking of: It wou'd be a kind of Miracle, if ever it shou'd come to a Condition of affording any Satisfaction.

But if, as it happens pretty often in the Case of *Pear-Trees*, and sometimes, but not so often, in the Case of *Stone-Fruit*; if, I say, that Tree, thus taken down lower, has shot fine Branches at its new Extremity, as well as that, which, having shot but one at the top of the Stem, has been likewise taken down lower than the place of that Branch; then both the one, and the other will fall in one of the Cases heretofore explain'd for the first Shooting of those new-planted Trees which have happily succeeded; and so we have nothing particular to add to the Conduct that is to be observ'd for them.

Let us now proceed to the Tree, which had only produc'd one fine Branch, be it either about the middle of the Stem, or at the bottom; supposing always, as we have said, that even in that first Year Care shall have been taken, in both Cases, to render both these only Branches straight, if they were not so naturally: For, if that Care has not been taken, the Gard'ner must have been oblig'd, as I have said heretofore, not only to lower the Stem to those Branches, but likewise to shorten them within the compass of two or three Eyes of the place whence they grew; which being granted, we must in this Case only consider for the first *Pruning* that which shall be perform'd upon the Branches which are to shoot from those two or three Eyes of a Branch so extraordinarily shorten'd: And thus this first *Pruning* will fall in one of the Cases of the *Pruning of the first Branches of a new-planted Tree*, without any necessity of saying any thing more upon that Subject.

The Tree, which in the first Year had only produc'd one *Wood-Branch*, having been *Prun'd* upon that Branch, never fails, as we have already said, of producing others on the Extremity of that Branch; and, for Example, will, without doubt, have shot upon it,

it, at least, one thick one, with some weak ones, and perhaps two or three thick ones, which is pretty usual, and may be more. This great Multitude does not happen commonly; but yet it happens sometimes.

If unfortunately it had only produc'd one upon it, partly of the same thickness with the Mother, which may happen by some accident befalling to the first Roots, then you must be Positive either in re-cutting the New one very short, leaving it only two Eyes, or in cutting it quite off, which is yet better; in hopes that the other, which we must call the Old one, may shoot forth something more considerable the following year, as it may happen: For the Tree may chance to have made better Roots the third year, than it had produc'd either the first, or second; and consequently, being grown more Vigorous, it may shoot a greater quantity of Fine Branches.

But yet, to speak the Truth in such Cases, there is no relying upon the Success of such a Tree, which shews so little Vigour in the beginning; and therefore it is my Opinion, and I think it very material, to have recourse to the Magazine of Trees in Baskets, not to languish in vain hopes, at least beyond the second year, otherwise you may chance to languish yet longer, and always to no purpose, as it happens to a great many of the Curious.

And if that single Branch, being well *Prun'd*, has perform'd its duty so well, as to have produc'd at least two of those fine ones, which we look upon as *Wood-Branches*, or perhaps three or four, besides some of those that are fit for *Fruit*.

In all these Cases, nothing can be done besides what has been said for the Trees, which in the first year of their being Planted have produc'd the same quantity of Shoots, that is, some *Fruit-Branches* may be preserv'd; but among the thick ones, only such as may conduce towards the Beauty of the Figure, cutting off all the others without any mercy, either close, or within the thickness of a Crown-piece.

So the second *Pruning* of such a Tree must be perform'd upon the fine Branches that are shot from that single Branch, and must differ in nothing from the first that is to be perform'd upon the fine Branches, which the first year have been happily produc'd from the Stem of a new Planted Tree.

The Precaution of keeping upright the single Branch grown upon a *Wall-Tree* would be good, but is not so absolutely necessary as upon a *Dwarf-Standard*; by reason of the Convenience of turning almost at pleasure the Branches that shall proceed from that, after having *Prun'd* it: The only thing then, is to take care in their youth of fastening them to the Right and Left, according as may be necessary for laying the foundation of a Beautiful Figure; and in so doing, it is easie to remedy certain defects which can hardly be remedy'd in a low Standard.

## CHAP. XXI.

### *Of the second Pruning of a Tree that has Produc'd two Fine Branches in the First Year of its being Planted.*

AS to our Tree, which in the first Year has produc'd two Fine Well-plac'd Branches, we must suppose, and it is generally very certain, that both the one and the other having been *Prun'd* within the compass of four, five, or six Inches, or thereabouts, with all the Caution heretofore observ'd, both as to their thickness and Original, as well as the situation of the last Eyes that have been left at their Extremities; I say, it must be supposed, that both these Branches shall each of them have produc'd at their Extremities, at least two fine strong ones, both well plac'd, besides some small ones that shall be grown either beneath, or above them.

Those two fine Branches, newly grown, fill up the two sides agreeably, which (to advance the perfection of the round Figure) stood in need of that help.

And if one of these two first, or even both had produc'd each of them above two, either according to the order of Nature, or against it; we must without doubt resolve to cut off close those among these new-comers, which, in what Situation soever, are not favourably enough plac'd to conduce to our Design; and therefore if they prove higher than those which we preserve, in such a Case, if the Tree be but moderately Vigorous, you must take it down to these, to strengthen it the more: But if it be very Vigorous, those highest may be cut square, within the thickness of a Crown-Piece, from the place where they issue; and likewise if those unhappy Branches prove lower than those that

that are preserv'd, and in a situation inclining on the inside of the *Tree*, they must likewise be taken away, but no otherwise than in the manner I have just express'd, which I call *Pruning* within the thickness of a Crown Piece, as it appears by the Figure.

This *Pruning* perform'd within the thickness of a Crown, often serves to give us the following year a small *Branch* or two, which proceed from the sides of that thickness, and are commonly very good for *Fruit*; it happens likewise then, that as the *Sap* finds it self stop'd thus at the Overture of the *Branch* in question, and as it must of necessity move forwards, it not being able to return back, being push'd and press'd by some other that follows it, close, to make it go out at the top; I say it happens then, that this first *Sap* enters sometimes, or the greatest part of it, into the superiour *Branch*, which is nearest to that thickness, and which, however, had already a Portion suitable to its thickness.

If it cannot enter altogether in it, as it happens pretty often, the remainder of it is divided, and bursts out, as we have said, upon the sides of that small thickness, and furnishes us with some of those good little *Branches* which we desire, as it appears by the Figure.

Sometimes we may also take avay those wretched *Branches* slopingly, that is, cut them in such a manner, that on the inside of the *Tree* there may not remain the least part, and on the outside enough for some New *Branches* to shoot out of it, as it appears likewise by the Figure.

This sloping way of *Pruning* is to be practis'd when the *Branches*, being neither altogether outward, nor yet wholly inward, they are a little upon the side, on which part however they cannot be preserv'd; but yet are plac'd so, that by that slope one may expect the following year a *Branch* shooting wholly outwards.

Now such a *Branch* may chance to be thick, and consequently capable of conducting to the Figure, or weak, or to fit to give *Fruit*; and in case, as it happens sometimes, nothing proceeds from that slope, the Figure of our *Tree* will be no wise alter'd by it.

I dare be bold to say, that this *Pruning* in a sloping manner, which is a New Invention, is an Excellent way of *Pruning* to be practis'd upon all sorts of *Trees* that have a little Vigour, whether Old or Young, when some *Branches*, unhappily plac'd, as we have just explain'd it, give us cause to do it with hopes of success: It is not indeed infallible, but it succeeds very often, and for certain never spoils any thing: Therefore I advise others to use it as I do; I generally find a great deal of benefit by it, and am very well pleas'd with my self for having invented it.

Perhaps it may not be improper to relate here what made me think upon it; I knew, as every body does, and as we have just observ'd it upon the account of the *Pruning*, which is perform'd within the thickness of a Crown Piece; I say I knew, that according to the Order of Nature, the *Sap* newly form'd in the Spring, regularly presented it self at the entrance of all the Channels of the *Branches* form'd the preceeding year, to Nourish, Thicken, and Lengthen them, &c. And so I knew that it was certainly to return to endeavour to perform its function in the *Branch* I took away, it being ignorant, as I may say, of its being taken away; therefore I concluded from thence, that apparently part of the *Sap* would make its way at the Place where it found it self dam'd up, provided it found room enough to get out: So that, in leaving such a Place on the outside, a *Branch* would shoot from it to do me a kindness. Success has confirm'd my Reasoning, and Practice; and so from a *Branch* that was grown in an ill and troublesome situation, I put my self in a way of drawing a considerable advantage for my *Tree*.

If it should happen as, sometimes it does, that one of those two first *Branches*, we speak of in this Chapter, should have produc'd from its Extremity but one thick enough, with some small ones lower, whilst her Neighbour has produc'd the two we expected; or this having really produc'd two, of which, one might be broken, or spoil'd by some Accident, so that only one remain'd on that side: These are two Cases in which I think it very material to Explain what is to be done.

As to the first, which is the growing but of one *Branch* instead of two, which in probability were to have grown; in that first Case, I say, supposing there may be cause to judge, that the *Prun'd Branch* has not receiv'd so large a proportion of *Sap* as her Companion, which will appear in that, for Example, it shall not have thicken'd in proportion to the other, which proceeds from some inward, un-fore-seen, and inevitable defect; in that first Case, I say, this New *Branch* must be cut a little shorter, and that with a Prospect that apparently it will yield but one, which consequently must be expected on that side where it is most wanted for the Figure; with this Resolve, that, if the following year the Original *Branch* shews no more Vigour than the fore-going year, neither it, nor its Offspring

spring must hardly be look'd upon, but as *Fruit-Branches*, which cannot be lasting, and so we must be necessitated to endeavour betimes to establish the foundation of the Beauty of our *Tree* upon the *Branches* that may proceed from its Neighbours.

In the second Case, wherein one of the two New *Branches* which are grown from a Vigorous one, may have been torn off, or broken; in that second Case, I say, whether the remaining *Branch* prove that which was grown on the Extremity, or that which was grown from the second Eye, we may apparently reckon that the *Sap* which made the two, and would have nourish'd them both, had they remain'd, will come altogether into the remaining; and that so it must be *Prun'd*, in hopes that it will at least produce two, which will be well plac'd, according to our wish, if, in the *Pruning* of it, we observe all that is necessary to be done; but above all, we must always take care not to let one side of the *Tree* grow higher than the other, for fear of the Deformity which attends that Inequality, which must be avoided as much as is possible: And therefore in *Pruning* such a Vigorous *Branch*, which is left alone by some accident befall to her Sister, we must regulate the length of the new *Pruning* we perform upon it, to that we make upon the opposite *Branch*, which has not profited proportionably to what it had done the first year; and that in fine, until the whole Figure of such a *Tree* comes to establish it self entirely upon the *Branches*, which successively must come from the vigorous side, a Skillful Gard'ner is sufficiently the Master of such an Operation.

If from the last Eye of one of the two first *Branches*, from which Eye, according to the Order of Nature, a thick one should have proceeded; if such a one, I say, should bring forth a weak *Branch*, or even if the two last Eyes have produc'd two weak ones, which, as we have said, regularly should have given us two thick ones, and under these weak ones should have grown one or two thick ones, or more, which happens sometimes; in such a Case, this, or these weak ones, must infallibly be look'd upon as *Fruit-Branches*, their weakness procuring them that Merit in regard to us; and so we shall preserve them very precious, breaking them as little as can be on their Extremities, in case they appear too weak for their length, or leaving them untouched, if they seem well proportion'd of themselves: And this without doubt is one of the most material Advices I could give.

Woe to those *Trees* which shall pass through the hands of Gard'ners who will not be able to make use of this Advice, or shall take away those weak *Branches* as causing any deformity to the wretched Idea they have form'd to themselves of a *Tree*, if they have really fram'd any, for the greatest part of them seldom frame any; and cut pell-mell, whatever sort of *Branches* fall under their Hands: Those Wretches, in the first place, do not observe or mind that Fine *Fruit* never spoils any thing, what ever place it be in: In the second, that it is a kind of Murder to take away a fine disposition to *Fruit* when it is already form'd, although an ignorant Man does not know it; and that lastly, the Beauty of the Figure of a *Tree* only consists, and depends absolutely upon the thick *Branches*.

In the mean time, it is to be observ'd, that the thick *Branches*, that are thus grown below those weak ones, which are found on the Extremity; that those thick *Branches* I say, shall commonly in that place have begun to follow the Order of Nature for the difference of their Thickness, and Length, in the same manner as if they had grown on that Extremity, where Naturally they ought to be.

In that Case they must be *Prun'd* just as if they were really grown from that Extremity; that is, one or two of them must be preserv'd, supposing they may contribute to the Figure; which being granted, they must be *Prun'd* of a reasonable length, according to their Strength, and the Vigour of the whole *Tree*, still preserving the necessary regard that must be had for the *Branches* they are to shoot from the last Eyes of their new Extremity; and as for those that might be prejudicial to the Beauty of the *Tree*; if there are really any such, they must be taken away in the manner here above Explain'd; that is, within the thickness of a Crown Piece, or else slopingly, according to what may be best for the advantage of the *Tree*.

I may begin to give notice here, that it happens sometimes, and even pretty often, that this *Branch* which was left long for *Fruit*, which in the order of Nature should always remain weak, may, notwithstanding, chance to thicken in an extraordinary manner, and perhaps produce one, or many thick ones on its Extremity, while that those thick ones which had been *Prun'd* short for Wood, remain almost in the same Condition, and only produce weak ones, the *Sap* having, as I may say, alter'd its Course, just as it happens sometimes in some Rivers.

In such a Case, we must submit to that alteration, which cannot be prevented, nor hardly alter'd when once form'd; therefore we must begin the very next year after that alteration, to use that *Branch* like a Wood-Branch, which having alter'd its property, is become

become a *Wood-Branch*, from being a *Fruit-Branch*; and so likewise alter our Method in respect to that which, from being a *Wood-Branch*, is become a *Branch* for *Fruit*.

There is nothing to be fear'd so much, as to see a *Tree* grow thin towards the bottom, which part ought to be fullest; which is the reason that I am so very solicitous, that no *Branches* for *Wood* should ever be left long in the *Pruning*, unless it be perhaps on some here and there, as we have said, to let them take up, for a Year or two, part of that *Sap* which might prove troublesome to us, and afterwards remove them when the *Tree* bears *Fruit*; that is, it must be done sometimes, when they are extraordinary vigorous *Trees*; but as it is never done without good Grounds, so it ever proves advantageous.

This Way of *Pruning* thick *Branches* long, is a Fault most *Gard'ners* are guilty of, and that for want of knowing, or taking notice, that as the greatest part of our *Fruit-Trees* are not capable of furnishing at one and the same time a great Extent, that is, to fill at once both the Top and Bottom; and that naturally, contrary to our Intention, and the Beauty we affect, they all incline to grow upwards, and consequently, that Bottom which shou'd be fullest, remains most bare, unless we use a particular Application to oppose in this the Course of Nature, which seeks, it seems, to deceive us: Therefore a great deal of Care must be taken to stop, that is, to *prune* those thick *Branches* short enough, it being most certain that they never shoot much in the lower part, from whence they proceed; but only on their Extremity, whatever it be, high or low.

The Defect of Thinness, which is sufficiently minded in *Dwarfs*, is yet much more observable in *Wall-Trees*; where, among unskilful *Gard'ners*, we seldom see any thing but the top of the Wall well cover'd, and that even *Garland-wise*, so that commonly all the new *Branches* exceed the top of it, and that spend the Vigour of the *Tree* to no purpose; which obliges them to cut those wretched *Branches* four or five times in a Summer, to prevent the Disorders of the Wind; while the Heart of the *Tree* is only compos'd of long, blackish, mossy, wrinkled *Branches*, destitute of those other little ones that shou'd accompany them; and even often full of Scars, and consequently, the Wall, which shou'd be cover'd every where, always beginning from the bottom, on the contrary, appears quite bare, and the *Tree* has none of those *Branches* it ought to have.

Granting then, that a *Branch* for *Wood* must seldom, or never be left long at the first *Pruning*, unless it be in order to form a *Tree*, or to fill up some parts of the farthest sides, it is yet less allowable the following Years, upon the thick new *Branch*, which is grown from that which having been left long for *Fruit*, is afterwards grown thick, by an unexpected and extraordinary abundance of *Sap*.

This is another dangerous Rock, from which few save themselves: Therefore I am of Opinion, that, instead of performing our *Pruning* upon a thick and long *Branch*, shot from one that had been left long for *Fruit*, we shou'd descend, or come down to that old one, and shorten it, leaving it no more length than it might have been allow'd, had it been at first of the thickness it is grown since.

And if such an old *Branch* shou'd not prove of an excessive length, it will be sufficient to *prune* all the new ones that are grown from it so close, that not the least part of them may remain, whence any thing new might proceed.

In these two Cases it is most certain, that such an old *Branch*, so order'd, will not fail, at the very following Spring, to produce others on its Extremity; some for *Fruit*, and others for *Wood*; among which, those must be chosen that are fittest for the Figure, to the end that, according to the Maxims heretofore establish'd, they may be *prun'd* like thick *Branches*, and continu'd to be order'd as such, while Nature causes no alteration in them.

## C H A P. XXII.

*Of the second Pruning of a Tree, that on the first Year had produc'd three fine Branches for Wood.*

THE *Tree*, which had produc'd at first but two fine *Branches*, being *prun'd* the first and second time it cou'd be so, we must now proceed to that which had produc'd three proper to make a fine *Tree*.

In regard to which, I do not think I need add any thing to what I have said of the *Pruning* of the preceding, unless it be, that, to avoid Confusion, every *Branch* may be allow'd two Inches more than those we have been speaking of, in order to procure both

Overture

Overture and Roundness to the *Dwarfs*, as well as Fulness and Roundness to the *Espaliers*; and therefore great regard must be had for the two or three last *Eyes* or *Buds* on the Extremities of the *prun'd Branches*, to the end that those that are to proceed from those *Eyes* may be happily dispos'd to contribute to the Beauty of the Figure. It is a great happiness, as we have already said, when a new *Tree* produces three fine *Branches* the first Year: But it is yet better, when in the second it produces two more on the Extremity of each of those three.

I may inform you here, that if, on a *Dwarf*, the *prun'd Branch* of a fitting length be capable of producing more than one thick new one on the Extremity of it, and yet we have occasion but for one, the last *Eye* may indeed be inward, but never the second; and therefore the second *Eye* must either be broken, or torn off, if required by the disposition of the *Branches* that are to come, as we have said, either within the thickness of a Crown-piece, or sloping, as shall be judg'd most convenient.

## C H A P. XXIII.

*Of the second Pruning of a Tree which had produc'd the first Year four fine Branches for Wood, or more.*

TO *Prune* for the second time a *Tree*, which in the first Year had produc'd four fine *Branches*, and even more, it is certain, that as this *Tree* has a great deal more Vigour than all the others we have mention'd, so it requires more Application and Skill, not to let it fall into those Inconveniences wherewith it is threaten'd.

I must say here, that in such a *Tree*, especially in a *Dwarf*, it is necessary sometimes to preserve some *Branches* upon it, which at that time are no ways conducing to the Beauty of the *Tree*, but serve to consume for a time part of the *Sap*, which might be prejudicial to the *Branches* that are to yield *Fruit*; but none of those that might cause any Confusion. Those *Branches* which must be look'd upon as Temporary, may be *prun'd* without Consequence; so they may be left long, since they are to be wholly taken away as soon as the *Tree* is form'd, and produces a reasonable quantity of *Fruit*.

As to those that are essential for the Beauty of the *Tree*, I have begun to *prune* them all a little longer than those of the preceding *Tree*; that is, about two or three *Eyes* at most; as well to avoid Confusion, which is a very pernicious thing, and to be avoided at any rate, as to make an advantage of the Vigour of such a *Tree*; which, without such a precaution, wou'd not yield *Fruit* of a long time, because the great abundance of *Sap* might convert into *Branches* all the *Eyes* that shou'd have turn'd into *Flower-Buds*, had their Nourishment been more moderate.

Such a *Tree*, at the End of the second Year, appears in a manner quite form'd, by means of all the new *Branches* that every one of the old ones that have been *prun'd* shall have produc'd on their Extremities; and, among the new ones, Care must be taken to chuse those that conduce to the Beauty of the Figure, to *prune* them again, partly of the same length as those had been *prun'd* for the first Time, from which they proceed; endeavouring, above all, to judge whether the *Branch* that has been *prun'd* may, at least, produce two, in order to preserve them both, if they prove fit to contribute to our Design: Or in case one must be quite taken away, let it commonly be the highest, to the end that, as much as possible can be, the lowest may always be preserv'd, as the fittest to form or preserve the Beauty we look for; and by that means, not only the place which is cut shall be (to use the *Gard'ners* Term) quickly cover'd again, which is much to be desir'd, as an Ornament in a *Tree*; but besides, it will make no Wound upon the *Branches* that shall be preserv'd; and consequently, the *Tree* will thereby be infallibly handsomer and sounder.

But if the Vigour of that *Tree* be observ'd to continue, as it is very common, and even to augment visibly, in such a Case Confusion is to be fear'd more than ever, either in the Heart of our *Dwarf*, or in respect to our *Wall-Fruit-Tree*, whatever *Trees* they be, of either kind, *Pear-Trees*, *Apple-Trees*, *Plum-Trees*, *Peach-Trees*, *Cherry-Trees*, *Fig-Trees*, &c. Therefore that second *Pruning* must be perform'd yet a little longer than the first, particularly if the *Tree* appears inclinable to close; and that length must be about a large Foot, or a little more, to employ that abundance of *Sap*, which, we judge, must not be restrain'd, nor contain'd in a small space.

Upon condition, that when, from the second *Pruning*, other good *Branches* shall be grown, which shall begin to open the *Dwarf* reasonably, or to fill sufficiently our *Wall-Fruit-Tree*, especially the *Tree* beginning to yield *Fruit*; upon condition, I say, that then we shall return to our ordinary *Pruning* of six or seven Inches upon the most vigorous *Branches*, and four or five upon the moderate ones.

This great *Fury* seldom fails of diminishing at the End of the first five or six Years, if the *Tree* has been well govern'd; and then all those little *Branches* which we have taken care to procure in a great number at the bottom, and have afterwards preserv'd with Care, begin to give us an ample *Recompence* for all our *Cares*: And even pretty often, in such Cases, we come to *prune* over again here and there some of the old *Branches*, in such Cases, the great *Vigour* of the *Tree* had oblig'd us to leave of an extraordinary length; and at the same time we aim still at extending, by way of *Overture*, on the sides, there to employ usefully the *Vigour* of that *Tree*, and indispenceably to preserve its agreeable Figure.

It is upon those very vigorous *Trees* that we must begin to perform some Masterly *Strokes*: We must, as is done in point of *Fountains*, make here and there a kind of *Cupping*, or rather, a kind of *Superficial Discharge*; that is, for Example, leave upon that *Tree*, without any use, some *Branches* cut *Stump-wise*, and even some thick ones, though of false *Wood*, in which, for some Years space, that furious *Sap*, of which we have too much, may lose it self in vain, which otherwise might disorder some of our principal Parts: And even, if upon those sort of *Trees* any *Branches* of false *Wood* be found in a place where they may serve towards the Figure of the *Tree*, they must be preserv'd, and us'd as such; being certain that, as they will take up the greatest abundance of the *Sap*, the good *Branches*, which have produc'd those false ones, will receive less, and consequently will bear *Fruit* the sooner; these false *Branches*, in the mean time performing the same Effect, as to the Figure, as good ones cou'd have done.

Such *Branches* may likewise be left, where-ever the *Overture* of the *Tree* shall not be prejudic'd by them; from whence, the *Tree* bearing *Fruit*, they may at pleasure be taken away without any prejudice to the Figure; provided always they cause not the least Confusion, that being the greatest harm that can happen to a vigorous *Tree*.

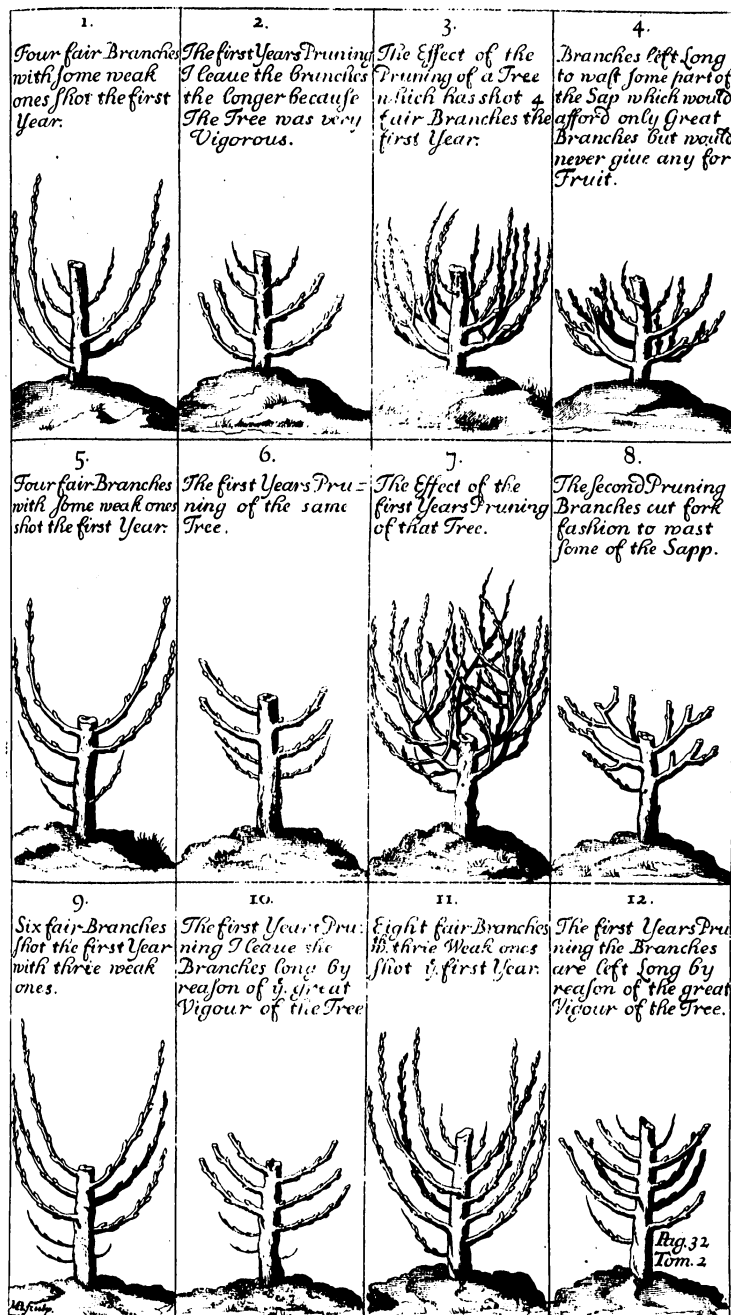
And whereas, to moderate the great *Fury* of such a *Tree*, in respect to our selves, that is, to make it bear *Fruit* the sooner, two things are particularly required, besides the *Overture*; which are, first, the length and multitude of good weak *Branches*, when they are plac'd so as to cause no Confusion; and in the second place, a considerable Plurality of Out-lets upon the thick *Branches*, through which that abundance of *Sap* may perform its Effect, since we cou'd not hinder it from doing it in some part of the *Tree*.

Therefore, when the Figure of my *Tree* will permit it, if some *Branch*, prun'd the preceding Year, has produc'd three or four, all pretty thick ones, I often do not retrench them; so that having one or two of the best plac'd, I preserve one or two of the others for the *Pruning* of the next Year, and leave them reasonably long. Besides this, if I preserve the lowest, I cut the highest *Stump-wise*; and when I preserve the highest, I leave under them, either on the out-side, or upon the sides, one or two *Stumps* of the thick *Branches*, form'd like the *Hooks* of a *Vine*, each about two Inches in length, as it appears by the Figure annex'd hereunto; which succeeds very well to me.

There infallibly happens in those *Stumps*, or *Hooks*, a Discharge of *Sap*, which produces some favourable *Branches*, either for *Fruit* when they prove weak, or to become in time fit *Branches* for the Figure when they are strong.

The best way always is to lower the *Tree*, in taking away the highest *Branches*, to preserve the lowest; and not take away the lowest, to preserve the highest; to the end, that if the *Tree* cannot fill both at top and bottom, it may rather be dispos'd to remain low, and well fill'd, than to rise high, without being well fill'd.

These kind of *Stumps* and *Hooks* will not please our *Gard'ners* at first, who neither know my Principles, nor the way of *Cupping*; which we have explain'd here above: But if, after having known my Reasons, and long Experience, they will neither approve, or try them, so much the worse for them; they must give me leave to pity their Ignorance, or Obstinacy.



## C H A P. XXIV.

*Of the Pruning that must be perform'd the Third Year, upon all sorts of Trees planted within Four Years.*

**T**His Case does not require the preceding Distinctions we have made, to determine what was to be done to *Trees*, according to the smaller or greater quantity of *Branches* they had produc'd the first Year: They must, at the end of four Years, be partly all of the same Classis, though they be not all furnish'd with an equal quantity of thick *Branches*: But however, both the one and the other must have produc'd a sufficient number, to shew a *Head* entirely form'd; and though even that, for Example, which had produc'd but one the first Year, shou'd have produc'd but four or five in the fourth, still there shou'd be nothing to be said in respect to that, since that, if it be vigorous, it will partly fall under the Case of a *Tree* which at first had produc'd four or five, or more; and if it be not of those that are capable of producing more than one thick *Branch* on the Extremity of the *Pruning*, you must regulate your self upon the meanness of its Vigour, both in keeping the thickest *Branches* short, and expecting but one thick one on the Extremity of each, making it ever grow on that part where the Figure requires it most.

We must always inviolably follow the *Idea* of a fine *Tree* we have first of all propos'd to our selves, either in a *Dwarf*, or *Wall-Tree*, and never fail to proportion the Burthen of the Head to the Vigour of the Foot, in leaving more and longer *Branches* on a vigorous *Tree*, and less and shorter on that which appears weak.

And whereas many old *Branches* must be carefully preserv'd on a vigorous *Tree*, especially for *Fruit*, provided there be no Confusion; on the contrary, you must ease a weak *Tree* of the Burthen of the old *Branches*, as well those that are for *Wood*, as those that are for *Fruit*; and cut them short, in order to make it shoot new ones, if it can, with resolution to pull it out of the *Ground*, if not able to perform it; which being done, a better must be plac'd in its room, after having taken away all the old *Earth*, which may be judg'd to be either ill, or worn out, and having put new in the room of it.

I still forewarn, that, in *Pruning*, Provision must be made for those *Branches* that may proceed from those that are *Pruning*, in order to prepare some that may be proper for the Figure, with this Assurance, that when a high *Branch* is taken down over a lower, this being strengthen'd by all the Nourishment that wou'd have gone to the highest, which has been taken away; this low *Branch*, I say, will produce more *Branches* than it shou'd have done, had it receiv'd no Re-inforcement.

In short, when, according to my Principles, a young *Tree* shall have been conducted to a fourth *Pruning*, the Effect will infallibly have made good what I have promis'd, both as to the beautiful Figure, which must then appear in its prime, and as to the *Fruit*, of which, *Pears* then begin to shew a Sample, and *Stone-Fruit* abundance: After this, apparently every body must be capable thenceforward to manage all manner of *Fruit-Trees*, without needing any other Instructions than the preceding; and indeed, I have no other new ones to give; and it wou'd be ridiculous and tiresome to repeat the same things, which, in my Opinion, I have sufficiently establish'd.

It seldom happens, that all the *Trees* of the same *Garden*, though order'd alike, prove equally vigorous; no more than the Children of the same Father, all equally healthy; *Trees*, as well as Men, are subject to an infinite number of Accidents, that can neither be fore-seen, nor avoided; but it is certain, that all the *Trees* of a *Garden* may be form'd agreeably in their Figure; and this is one of the principal things to which a *Gard'ner* is oblig'd.

Above all, I advise every body not to be obstinate in preserving *Pear-Trees*, which yearly, towards the end of Summer, grow extream yellow, without having produc'd fine *Shoots*; nor those, of which the Extremities of the *Branches* likewise die every Year. They are commonly *Trees* grafted upon *Quince*; of which, some of the principal *Roots* are dead, or rotten: They are *Trees* that produce but small *Roots* at the upper part of the Foot, and consequently, *Roots* that are expos'd to all the Injuries of the Air, and of the *Spade*.

The same thing may be said of the *Peach-Trees* that appear the first Years to gather Gum at the greatest part of their *Eyes*, and of those that are extreamly attack'd with certain little *Fleas* and *Pismires*. Such *Peach-Trees* have certainly some rotten *Roots*, and will never do well.

I am likewise of the same Opinion for those *Trees* that shoot on all sides an infinite number of little, weak, sapless *Branches*, with some thick ones here and there; both the one and the other, for the most part, of false *Wood*: In which case, a great deal of time may be lost upon ill-grounded hopes.

That which is best to be done in all these Occasions, is, as soon as can be to remove such *Trees*; and when they are not extremely old, or spoil'd by the *Roots*, venture to plant them again in some other place, in good *Ground*, after having cleans'd them of all their *Rottenness* and *Cankers*, in order to see if they will come to any thing, to make use of them elsewhere; which happens sometimes with *Pear-Trees*, but very seldom with *Stone-Fruit*, especially *Peach-Trees*; still putting better in the room of them, with all the Conditions heretofore explain'd.

## CHAP. XXV.

### *Of the first Pruning of Trees that have been Planted with many Branches.*

AFTER having sufficiently explain'd, in the Treatise of *Plantations*, my Aversion to plant little *Trees* with many *Branches*, I am willing at present to believe, that as I seldom plant any, those who will do me the honour to imitate me, will do the same. However, Those that will plant such, must principally observe two things: The first is, to cut off whatever may cause a Confusion, and is not proper to begin a fine Figure. The second, to leave a Length of about six or seven Inches to every *Branch* they preserve upon them: And as for the other *Branches* that shall proceed from these, they must regulate themselves upon the Principles which we have sufficiently establish'd for the *Pruning* of other *Trees*:

It is certain, that such *Trees*, planted with *Branches*, are not commonly so easily turn'd to receive a fine Figure, as those I affect to plant: The old *Branches* that are left upon them, are not often happy in producing others on their Extremity, yet less to have them well-plac'd; they generally produce them disorderly, and consequently must be often wounded, before what is desir'd can be met with; but when at last attain'd, 'tis but following what has been said distinctly enough for the management of a *Tree*, which having been planted without any *Branches*, has since produc'd some very fine ones, and very well plac'd.

And when *Trees* have been planted with a great many more and longer *Branches* than they shou'd have been, so that there appears no manner of disposition towards the Figure we ought to wish for, Endeavours must be us'd immediately to reduce them upon a fine Beginning, and that conformably to the *Ideas* of Beauty so often explain'd.

What we shall say hereafter, for the first *Pruning* of old *Trees*, that have never been order'd well, may serve altogether for the first *Pruning* of these, without saying any thing more about it.

Though commonly, either as to low *Standards*, or *Espaliers*, I condemn the manner of *Planting* little *Trees* with many *Branches*, by reason of the Inconveniences which attend them, in respect to the Figure they ought to have, I am not, however, so severe in relation to high *Standards*, in which I do not condemn it so much, by reason that they do not require so great an Exactness for their Beauty: So that I allow they shou'd be planted sometimes with some *Branches* on their heads, when some are found well enough dispos'd for it; they will certainly produce *Fruit* sooner than the others: But still I have a particular Esteem for those that are planted without any.

There are some other Occasions in which a *Tree* may be planted with many *Branches*; and that is, in a great *Plantation*, where some other is dead; for supposing the *Ground* to be very good, and other good *Mould* put into the Hole, made to plant the other, in such a Case a *Tree* may very well be planted with some *Branches*, especially those *Trees* that are difficult to fructify. For Example, your *Lady-Tibb*, *Pears* without *Rinds*, *Virgoulez*, &c.

## CHAP.

## CHAP. XXVI.

### *Of the Pruning of High-Standards, or Tall Body'd Trees.*

AS the Number of Principles for the *Pruning* of *Dwarf-Trees* has been very great, so the number of Principles for *Pruning* of *High-Standards* Planted in open Wind, shall be very small: For as to *High-Standards* Planted against a Wall, they all require the same Precautions as the little ones; so that instead of meddling yearly with those Great *Trees*, I only desire, as I have said in the beginning of this Treatise, that they should be touch'd once or twice in the beginnings, that is, in the three or four first years, in order to remove some *Branches* from the middle, which might cause a confusion there; or to shorten a side which rises too much, or bring another nearer, which extends farther than in reason it ought to do: As for the remainder, we must refer it to Nature, and let her produce freely what she can, there would be too much pain and labour to order these with as much Circumspection as the others.

## CHAP. XXVII.

### *Of the first Conduct of Grafts in Slits made and multiply'd upon Old Trees, in place, either Dwarfs, or Espaliers.*

Nothing is so common in our *Gardens*, as to Graft in Slits upon Old *Trees*, be it either to be rid of some ill *Fruit* we are weary of, or to improve some considerable Novelty that has been discover'd; so that often we do not even spare good kinds, of such *Trees* of which we have a sufficient Number.

Now as many things are to be said upon those sort of *Grafts*, and first, if the *Tree* has so little thickness as not to be able to receive above one, as none are commonly apply'd without having three *Eyes*; it may very well happen that every such *Graft* shall produce three fine *Branches* fit to lay the foundation of a fine *Tree*; in which Case, we must have recourse to what we have said heretofore of the first *Pruning* of a *Tree*, which in the first year had produc'd three fair *Shoots*; and may allow them about two or three *Eyes* more in length; if, as in all likelihood it ought to happen, the *Graft* has produc'd very Vigorous *Twigs*, especially if the *Tree* appears inclinable to close.

In the second place, if the *Tree* to be Grafted is thick enough to receive two *Grafts*, as it is when it has a good Inch Diameter, or a little more; and if the two *Grafts* produce each two or three fine *Branches*, as it happens pretty often, then it is fit to study hard to avoid the great confusion that is threaten'd here by the great Proximity of *Grafts*, and consequently we must study to open; therefore among those *Branches*, those that being thick and inwards, form that defect which we must never suffer, must be taken away, either within the thickness of a Crown Piece, or slopingly, according as the Prudence of the Gard'ner, and the occasion of the *Tree* shall prescribe: After which, not only the first *Pruning* shall be perform'd a little longer than that of the *Trees* that have been Planted within a year or two, but a greater quantity of *Branches* must be kept upon them, as well quickly to finish the Figure, if the Matter be fit for it, as to employ for a certain time the overplus of *Sap* we judge fit for our Designs, and that Plurality of *Branches* may comprehend those *Stumps* and temporary *Branches*, as well as kind of *Hooks* that are on the outside, which I have spoken of heretofore.

In the third place, the same regards must be observ'd, and with more severity, as well for the Overture, as for the length of the first *Pruning*, if the Grafted *Tree* has been capable of receiving upon its head to the number of three or four *Grafts*, which happens when you Graft Crown-wise.

So much the rather, if the *Tree* having several thick *Branches* all pretty near the one to the other, and all capable of receiving several *Grafts* on the Head, it comes to be Grafted upon every one of them. Such a *Tree* is apparently a little Old, and yet vigorous enough, so that all the *Sap* which was prepar'd by the great number of its *Roots*, and was sufficient for the Nourishment and Maintenance of a great quantity of long and strong *Branches*, finding it self pent up in the little compass of those *Grafts*, produces generally there *Branches* of

of an extraordinary thickness and length, to that degree, that pretty often one *Eye* produces two or three *Branches*, most of them strong.

In such Cases, all the Prudence of a Skillful Gard'ner is requir'd to make a good use of that great Vigour thus reduc'd, to the end that by means of a wife Conduct in a short time a *Tree* may be brought to a fine Figure, and to bear a great deal: Nothing is more common than to see such *Graffs* ill order'd, and, if I may say so, Cobbled and Maffacred; and Consequently woe to that *Tree*, which for the first time falls under the hands of an ignorant Gard'ner.

The great Overture of the *Tree*, the reasonable length of certain *Branches* that are essentially necessary for the Figure, the Plurality of such as are not so; and that as well by the means of short and long *Stumps*, &c. as by means of those that are not employ'd, and may be remov'd at pleasure, without harming the *Tree*, both by the way of such *Prunings* as are perform'd within the thickness of a Crown Piece, and by the great length of the weakest *Branches* for *Fruit*, &c. All these together are Sovereign Remedies, and pretty easie against the disorders that might arise from such an abundance of *Sap* so reduc'd within a small compass; but yet how many ill-favour'd *Trees* are daily seen, for want of the Gard'ners having good Principles, or for not having Practis'd them from the beginning.

In the fourth place, the second, third, and fourth years, and even longer, if it falls out so, you must labour in the manner aforesaid, until the *Tree* begins to yield *Fruit*, and then you must not only return to the *Pruning* of six or seven Inches upon each *Branch*, but likewise rake them lower from year to year, here and there, in order to have the lower part of your *Tree* always well fill'd, which you cannot arrive to by any other means.

What I have now said in general upon Old *Trees* Grafted a-new in Place, may be indifferently apply'd as well to Dwarf-standards as to Walk-Fruit-Trees; which being granted, we must ever propose to our selves the fine Ideas both of the one, and the other, which we have recommended at the beginning of this *Treatise*; knowing for certain, that confusion and thinness are of a dangerous Consequence in point of *Espaliers*, as well as *Dwarfs*, tho' we must grant, that the conveniency of tacking the *Branches* of Walk-Fruit-Trees, and by that means of constraining them to lye as we would have them, renders the management of them much easier, more secure, and quicker for success, than it can be for Dwarf-standards.

## CHAP. XXVIII.

*Of what is to be done in Cases not foreseen, and yet pretty common to all manner of Trees, even to those that have been manag'd according to all the Rules of Art.*

I Think I may suppose, that whoever has with a sufficient application read over what I have establish'd here for the *Pruning* of *Trees*, has acquir'd a sufficient Knowledge, either to understand it well, or to put it in Practice with Pleasure and Advantage: To tell the Truth, I should be infinitely deceiv'd if it were not so, having made it my study with all the Care imaginable, to render my self intelligible, as well to the Ignorant, and the Novice, as to the Man of Understanding, whether Gard'ner or not, who shall be desirous to know my Sentiments upon this Matter. But I must add to this, that yet to arrive to a greater perfection of Knowledge, it will be necessary, for two or three years, to endeavour the putting in Practice upon young *Trees* both the Principles and Manner I use: Experience far exceeding Theory, or Speculation in this Case, as well as in all other practicable Arts and Sciences.

I dare affirm, that hardly any difficulty would ever be found in the Application of these Principles, if, as I may say, Nature was always wife in the Production of *Branches* and *Fruits*; or if she could be govern'd as the Carver governs his Marble, and the Painter his Colours; but it is certain, that whatever care we take for the Conduct of our *Trees*, yet we cannot always Labour about them with so much success, as to oblige Nature, which we are not altogether Masters of, on all Occasions to answer our Intentions and Labour.

Nature is a particular Agent, but yet a necessary one, which in her Actions depends upon an infinite number of Circumstances, either as to Times, and Seasons, or Grounds, of which, some are Good, and others Bad; some Hot, some Cold, some Dry, some Moist;

Moist; or Lastly, in relation to the different temper of *Trees*, of which some are apter to bear *Fruit* than others; some to produce more *Branches*, others less, some for Stone-Fruit, others for Kernel; and some others are even of a particular kind; as *Figs*, *Grapes*, &c.

I do not know whether I might not say, that pretty often the Rules for *Pruning* are in some respects the same in relation to *Trees*, as the Rules of *Christian Morality* are in respect to the Conduct of Men; our *Trees* to me, seem impatient under the Constraint we impose upon them, to keep them low; and sometimes tack'd against a Wall; they seem to aim constantly at their escape, and to surprize the Gard'ner, to shoot where he would not have them, and produce *Branches* where he would have none; just as the Corrupt Nature of Man often Rebels against the Divine Laws and Reason, and affects most of those things which Morality forbids.

It is likewise true, that in our *Trees* there sometimes happen certain Inconveniencies, which we could neither foresee, nor hinder; but at least, when they are come to pass, we must apply our selves to avoid the ill Consequences that might attend them; and moreover, if it be possible, as I have pretty often Cause to believe it may, we must endeavour to draw Advantages from them.

There are in this certain Particulars, which may prove tiresome to some Readers, I mean such as have no occasion for them, or such as do not care to understand *Pruning* to the bottom; but I hope they may prove of great use, or at least afford some Pleasure to true Gard'ners, who are sensible that nothing is so proper to improve in all manner of Sciences, as those studied and instructive Particulars.

I have in my time made many Remarks upon several particular Cases relating to the *Pruning* of all manner of *Trees*; which I look upon as proper to be added here, together with the Conduct I have held towards them.

But first, I think my self oblig'd to say that Stone-Fruit, and especially *Peach-Trees*, and even *Apricocks*, greatly require a second *Pruning*, and sometimes a third, besides the first which is done at the end of Winter: Those last *Prunings* must be perform'd towards the middle of May, when the *Fruit* is either knit, or blasted: At which time, I dare affirm, that they are not only advantageous, but even very necessary; at the same time you must likewise Trim the *Buds* and useless *Branches* of some others, which is no less necessary than those kind of *Prunings*.

These last Operations, viz. the second and third *Pruning* of Stone-Fruit, and the Trimming of the *Buds* and useless *Branches* of all manner of *Trees*, are necessary, both to strengthen certain *Branches*, which may be of use for the future to make *Branches* for Wood, as well as to take away intirely some that are grown useless, and inconvenient; their Function which was to bear *Fruit*, not having succeeded, their *Blossoms* being destroy'd. I will make a Particular Chapter of this hereafter, after having explain'd all the Particulars I have mention'd for *Pruning*.

All these I have divided into Four Classes; of which the first consists of those Remarks that are generally common for the *Pruning* of all manner of *Fruit-Trees*, whether *Dwarfs*, or *Walk-Trees*: This Class is a pretty large extent, and shall be the first I will Explain.

The Second of the Remarks that are peculiar in every Year to the first *Pruning* of Stone-Fruit, especially *Peach-Trees*, and *Apricocks*.

The Third, of those Remarks that relate only to the Second and Third *Pruning* of those very Stone-Fruits, as well *Espaliers*, as *Dwarfs*.

And Lastly, the Fourth is for the Trimming of the *Buds* and useless *Branches* of both.

## CHAP. XXIX.

*Common Remarks for certain singular Cases relating to the Pruning of all manner of Trees.*

I Shall set down the whole Matter of this Chapter without Order or Connection, by reason that it would almost be impossible to do it otherwise, every Case being Singular, and without the least relation to the other; as well as that, in my Opinion, it would be of no use, tho' it might be done; Besides, I did set down things carefully in my Journal, according to the Singularities I observ'd by degrees in my Studies upon Vegetation, and

therefore I think it will not be improper to Communicate them in the same Method I Collected them, which is as followeth.

## 1 Observation.

**W**hen from any part of a *Branch* that has been couch'd and constrain'd against a *Wall*, or from some part of the *Branch* of a *Dwarf* which Naturally stands *Horizontally*; that is, which instead of mounting upwards, like most of the others, has inclin'd sidewise (I have a great value for such which grow soon *Branches* for *Fruit*) I say, when such *Branches* have shot some of false *Wood*, which can neither serve towards the *Figure*, nor for *Fruit*, I Cut them within the thickness of a *Crown Piece*, or slopingly, according to my occasion, otherwise that false *Wood* would ruin that which is good, or at least it would ruin it from the part it came from, to the Extremity of the *Branch*; and if in the Summer I perceive the Beginning or Birth of such *Branches*, I break them off immediately, which is done with ease, pressing them downward with the Thumb, where they begin to appear, or in drawing them towards one.

## 2 Observation.

**I** Likewise remove all pretty strong *Branches*, shooting from a kind of hard knob upon which the stalks of *Pears* did grow, and upon which there may perhaps still be new ones; this is seldom any Foundation to be laid upon such *Branches*; therefore when I observe any such in the Summer, I tear them off immediately.

## 3 Observation.

**I** Do the same with those *Branches* which proceed from those which Originally were short and straight, looking upon the *Horizon*, and plac'd in the form of a *Spur* upon certain *Trees* where these *Spurs* are common, and extraordinary good to be preserv'd; such as *Ambrets*, *Virgoules*, *Burgamots*, &c. either in *Dwarf*, or *Wall-Tree*; those sort of *Branches* grown from those kind of *Spurs* will never be good for any thing, they will ruin both the Beauty of the *Figure*, and the disposition to *Fruit*, which commonly ruineth those kind of *Spurs*; and it, as it happens often, Nature seems obstinate, in producing upon those *Spurs* these kind of *Branches* which I am an Enemy to; it will be necessary, finally, to cut those *Spurs* within the thickness of a *Crown Piece*, in order wholly to remove the great Course of *Sap* which throws it self on that side, and does it a prejudice; we have already sufficiently spoken as to the effect of such an extraordinary *Pruning*.

## 4 Observation.

**T**he *Pruning* of weak long *Branches* may as well be perform'd by breaking them only on the Extremity, as in cutting them with the *Pruning-Knife*, and perhaps better, as well as faster; In my Opinion, in breaking of them we waste more *Sap*, which may be of use to form *Fruit-Buds* the sooner, since, as we have already said, they only grow on those places that receive little *Sap*.

## 5 Observation.

**A** Skillful Curious Gard'ner ought never to suffer any dry or dead *Argot*, or *Cock-spur* upon any *Trees*, but cut them off close when ever he perceives them, unless it be upon certain *Peach-Trees* that appear somewhat inclin'd to Gum, upon which it is dangerous to do it, by reason that the wound cannot soon be clos'd, and that the Gum Supurates through it; but it is certain that it is both a Beauty and Advantage, especially in *Kernel-Fruit*, to cut off wholly all those kind of *Argots*, by reason that the part infallibly closes again, provided the *Tree* be sound.

By this word *Argot*, I mean in this place, the Old Extremity of a *Branch* which has been formerly shorten'd at some distance from the *Eye*, so that this *Eye* has afterwards shot another *Branch*, and this same Extremity is grown dry, and half dead without having profited since the *Pruning*, which has given it Birth.

## 6 Observation.

## 6. Observation.

**W**hen from some good part of a *Tree*, which in the first Years had only produc'd *Branches* of a moderate Vigour, and thereby gave but little hopes of a long Continuance, we afterwards come to get one or two fine *Branches*, or more, though all of false *Wood*; if I find that I may lay the Foundation of a fine new *Figure* upon it for such a *Tree*, I always do it conformably to the Rules heretofore establish'd, and in the mean time I still preserve all the ancient weak ones, as long as they are capable of yielding *Fruit*, with a Resolve to cut them as soon as they cease to bear; and by that time, others shall have form'd themselves in the new *Figure*, and those shall insensibly supply the room of the old *Branches*.

But in case such *Branches* shou'd grow in a place whence I can draw no advantage to form a fine *Tree*, I take them off quite, in hopes that another Year may produce more favourable ones; supposing that such a *Tree* having been capable to shoot some, though ill-plac'd, the Vigour of it not only subsists, but even increases still, and will certainly produce new ones, and probably better plac'd; such kind of *Branches* will owe their Birth to some new *Roots*, which shall have been form'd in an extraordinary manner.

## 7. Observation.

**I** f likewise I find that an old *Tree*, and a little elevated, shoots finer *Branches* towards the bottom than on the top, and find the top in an ill Case, and almost forsaken by Nature, I abandon it likewise, and follow the Alteration which is happen'd, in order to begin a new *Figure*, and consequently make a new *Tree* again. Those Alterations happen pretty often, especially in *Peach-Trees* that begin to grow old: 'Tis fit, in such a Case, to improve the Advertisement Nature gives us.

But if the top appears pretty good and vigorous, so that it may yet last long in the Condition it is in, I then cut off entirely the new *Branches* that shoot below, to preserve the old ones, unless I find room in the Neighbourhood of the Foot to place these new *Branches*.

## 8. Observation.

**I** Never value certain small *Branches*, little and weak, which shoot from other small, weak *Branches*; from which, if thick ones chance to shoot, I only consider them as *Branches* of false *Wood*, and use them accordingly.

## 9. Observation.

**I** n the Order Nature commonly observes for the Production of *Branches* and *Roots*, what is produc'd a-new is less thick than the place from whence it is produc'd: And if, contrary to that Order, the *Branches* or *Roots* that are shot prove thicker than those whence they are produc'd, the new ones are commonly of false *Wood*, and must be us'd accordingly; still supposing, in respect to the *Branches*, that those which are of false *Wood* may be prejudicial to the *Figure*, or *Fruit*, as we have heretofore explain'd: For if, instead of being prejudicial, their Situation shou'd favour the *Figure*, or even be capable of wasting for a time part of the *Sap*, which is too abounding here; in such a Case, they must be preserv'd according to our foregoing Rules; but in the Case of *Roots*, as the thickest are always the best, the distinction of false *Wood* not being essential here, we must always preserve them, let them be grown how they will, and destroy the old ones, which seem to be abandon'd.

## 10. Observation.

**A** *Branch* must never be *Prun'd* without considering first the place whence it proceeds, to judge whether it be good, and capable of answering our End: For some *Branches* might be look'd upon as thick ones, if they proceeded originally from a weak place; which, notwithstanding, ought to be look'd upon as weak ones, because they proceed from a place being originally strong and vigorous; and so of the rest.

## 11. Observation.

**I** likewise, a *Tree* must never be *Prun'd* without having first examin'd the Effect of the preceding *Pruning*, in order to correct the Defects of it, if any; or else of preserving its Beauty with Care.

## 12. Observation.

**I**N point of *Dwarfs*, where we have not the convenience of Tying the *Branches*, as in *Wall-Fruit-Trees*; in order to judge of the quantity of *Buds* that must be left upon each *Fruit-Branch*, we must consider what the strength of such a *Branch* is capable of bearing of it self, without being expos'd to the hazard of breaking; and therefore it will be proper to lean upon the Extremity of such a *Branch*, to the end that, by the great or small Resistance we find in leaning upon it, compar'd to the known Weight of such a kind of *Fruit*, the Burthen may be proportion'd to the strength or weakness of the *Branch*.

## 13. Observation.

**C**ommonly in *Peach* and *Plum-Trees*, if a pretty old thick *Branch* be shorten'd, there are seldom any new ones to be expected, either on the Extremity, or in the whole Compass of it; the *Sap* of such a *Tree* can hardly penetrate so hard a *Bark*: But yet sometimes, the *Tree* having some Vigour left, the *Sap* produces its Effect upon the youngest *Branches*, near to that old one in question.

But the contrary as to *Apricock-Trees*, either old, or young; or young *Peach-Trees*, and all other kind of *Trees*; we may regularly expect new *Branches* from the old ones which have been cut shorter, seldom meeting with any disappointment.

## 14. Observation.

**W**hereas in vigorous *Trees*, either young or old, as we have so often declar'd, we only look for *Fruit* upon the weak *Branches*; on the contrary, in weak *Trees*, that have but little Vigour, we must look for *Fruit* upon the strong ones, and never upon the weak; those having too much weakness to be able to produce fine *Fruit*, and the others, which appear thick, and indeed are only so compar'd to the small Vigour of the whole *Tree*, have no more *Sap* in them than is requir'd for the forming of fine *Fruit*: So that in such weak *Trees*, all the small *Branches* must be taken away; they always appear worty out, whether they have given *Fruit*, or not; and they often perish without having fructify'd.

## 15. Observation.

**I**N all sorts of *Fruit-Trees*, being sound, a single *Eye* sometimes produces to the number of two, three, or four *Branches*, and for the most part pretty line ones: It is necessary to judge prudently which are the fittest to be preserv'd, either for *Wood*, or *Fruit*, and which are to be cut off quite: It seldom happens that above two are preserv'd, and even those must look upon two empty Sides, distant from each other; to that End the middlemost of the three is often taken away, and to the two remaining receive the better nourishment. This Operation ought to be perform'd in *Trimming* the *Buds*, and useless *Branches*, which is in *May*, or *June*.

## 16. Observation.

**I**N *Espaliers*, or *Wall-Fruit-Trees*, all the *Branches* may easily be dispos'd on one side or other, provided they be tack'd while they are young, for then they are easily bent; but if they be not order'd at that time, and shou'd make an ill Figure, they must be cut within the thickness of a Crown-piece, at the Season of the first *Pruning*, which shall be in *February* or *March* of the following Year; or, at least, upon the first *Eye*, in hopes that the sides of that thickness may produce some *Branches* which may prove more useful than the Mother.

## 17. Observation.

**T**Hough it be in some manner disagreeable, as well in a *Wall-Fruit-Tree*, as (especially) in a *Dwarf*, to see a thick *Branch* crotling the middle of the *Tree*, yet it is fit to preserve it when it contributes to the filling up of one of the Sides, which, without it, wou'd remain empty, and is necessary for the Beauty of the Figure. Such Niceties need not be observ'd for *Fruit-Branches*; they are good in any part.

## 18. Ob.

## 18. Observation.

**O**F all that depends upon Art, nothing seems securely capable of strength'ning a weak *Branch*, being within the extent of a thick one, but the taking away of all the other *Branches*, which are superior to it, and even that part from whence it shoots; so that this may arrive to be the highest of those that proceed from the same Mother, and consequently forms an Extremity to it. All the first, second and third *Prunings*, as well as the *Trimming* of the *Buds* and useless *Branches* in the Month of *May*, are very proper for it; but when naturally a *Branch* is weak on the Extremity of a thick one, there is no certainty of strengthning it, unless it be by removing an old *Branch*, originally superior to that whence that weak one sprung.

Not but Nature sometimes effects such things of her self, without removing any superior thing; as we have observ'd, speaking of some *Fruit-Branches*, which, by an overflowing of *Sap*, thicken more than naturally they shou'd do; but we, being ignorant how this is done, cannot possibly imitate it.

## 19. Observation.

**I**N order to *Prune* very vigorous *Peach-Trees* towards the end of the Winter, for the first time, it is necessary to tarry till they are ready to *Blossom*, in order to know with more certainty the *Buds* that will *Blossom*; for there are a great many *Blossom-Buds*, which never *Blossom*, the coldness of the Winter, or the abundance of new *Sap*, and sometimes the *Gum*, destroying a great quantity. Those *Buds* being known, we must regulate our selves accordingly, both for the choice of those *Branches* that are to be preserv'd, and for the length that is to be allow'd to them.

## 20. Observation.

**W**E observe, that the *Fruit-Buds* that are on the Extremities of the *Branches* are commonly thicker, and better fed than the others; which confirms what the Order of the Production of new *Branches* had taught us; which is, that the *Sap* always goes more abundantly to the Extremities, than elsewhere; which has given a Rise to the Maxim I have establish'd in my Reflections for the Effect of the Strong and Weak, in relation to *Fruit-Buds*, which form themselves upon all kind of *Branches*, strong or weak. From thence I concluded, that, especially for weak *Trees*, it is good to *Prune* them betimes, not to let the *Sap* waste it self in vain on Extremities that must be retranch'd. This teaches us besides, that in the Winter both the *Branches* and *Buds* thicken: We know it sufficiently, by the Example of *Almond-Trees* Graft'd at the end of Autumn, which, before the Return of the Spring, appear extremely press'd by the *Flax* that had been apply'd to them in *Grafting*.

## 21. Observation.

**W**E must never begin to *Prune* an *Espalier*, or *Wall-Fruit-Tree*, until it be quite untack'd; for, besides that the *Pruning* is perform'd with more ease, and quicker, it happens, besides, that in *Tacking* for the first time after the *Pruning*, the preserv'd *Branches* are the better order'd; and that often, out of Laziness, instead of undoing a *Tack*, to make a new one, a *Branch* is left as it was found, though ill-plac'd.

## 22. Observation.

**I**T is often necessary to *Untack*; for the first *Tacking* of the Month of *May*, first, in order to equal the Figure; in the second place, to remove from behind the Props of Stays such *Branches* as were already slip'd behind them; which must never be suffer'd there: Therefore it behoves one to be careful in the Month of *May*, often to visit *Wall-Fruit-Trees*, as well to prevent such Disorders, as to remove the languishing, wretched Shoots that wou'd only cause a Confusion.

## 23. Observation.

**T**HE multitude of *Branches* in the first Year, is not always a sign of Vigour; on the contrary, when they prove all weak ones, it is an ill Omen, which shews an Infirmitie in the *Roots*. And thus, for Example, Redness in the *Cheeks* is not always a sign of Health.

## 24. Observation.

**W**hen a *Tree*, either *Dwarf*, or *Espalier*, is great and old, it seldom shoots any green *Branches*; and consequently, it is not likely that any Faults can be committed in *Pruning* of it; always supposing, if a *Dwarf*, that it is open; if an *Espalier*, that the Figure of it be passably well establish'd: Faults are only greatly to be fear'd upon very vigorous *Trees*, which perform more than the *Gard'ner* would have them; that is, produce more *Branches* than he expected.

## 25. Observation.

**W**E can only judge of the Thickness and Weakness of *Branches*, comparatively to those that are adjoining to them in one and the same *Tree*. For Example, Some are deem'd weak in one part of a *Tree*, or in certain *Trees*, which in another might pass for thick ones: The Neighbourhood of a very thick one renders another, that is not so thick, weak, as well as many weak ones render another, that is not so weak, thick.

## 26. Observation.

**T**his Rule is very considerable, in order not to fail, affording sometimes an extraordinary length to certain *Branches*; which, though pretty thick, ought notwithstanding to be look'd upon here as weak and small, the length being necessitated by the Consideration of other neighbouring *Branches*, and thicker; which in the Neighbourhood, are look'd upon, and us'd like *Branches* for *Wood*.

## 27. Observation.

**W**hen weak *Branches* are very slender on their Extremities, it is a certain sign of an extreme Weakness; wherefore they must be much shorten'd: And when they are pretty thick there, they must be left somewhat longer, because they really are not so weak.

## 28. Observation.

**T**HE farther a weak *Branch* is distant from the Heart of the *Tree*, the less Nourishment it receives; therefore, in such Occasions, we must draw nearer upon the lowest; whereas, on the contrary, the farther a thick *Branch* is distant from the Heart, the more Nourishment it receives; for which reason it must be remov'd, in order to keep the Vigour in the middle, or in the lower part of the *Tree*.

## 29. Observation.

**F**rom some *Trees*, either old or new-planted, especially *Pear-Trees*, either *Dwarf*, or *Wall-Trees*, sometimes proceed *Horizontal Branches*, of an ordinary thickness, which are admirable to be preserv'd for *Fruit*, either shooting outwards or inwards: But regularly most *Branches* streighten again, and threaten a great deal of Confusion, if Care be not taken to take away those that are worst plac'd; or else are apt to disfigure, unless one be severe in cutting some of them short.

## 30. Observation.

**S**ometimes some *Branches* are *Prun'd* like *Branches* for *Wood*, though in reality they have no more thickness than a *Fruit-Branch* should have; and therefore must not be look'd upon as being real *Branches* for *Wood*, proper to establish and preserve long part of the Figure of a *Tree*, but rather as half *Wood-Branches*: They really are of some use for the Figure, and to fill up some Vacuity for two or three Years; after which, they must perish, which must be expected; and, without relying upon them, endeavour to get others near them, to supply their Room; otherwise a *Tree* will soon grow defective.

## 31. Observation.

**W**hen a *Tree*, either *Dwarf*, or, particularly, a *Wall-Fruit-Tree*, especially *Peach*, or *Plumb-Tree*, no longer shoots new *Branches*, it must be look'd upon as a decay'd *Tree*, and therefore another must be prepar'd against the next Year; and without *Pruning*

*Pruning* any of its *Branches* for *Wood*, all those that are likely to produce fine *Fruit*, must be preserv'd to that end, retrenching all the Sapless ones exactly, as being incapable of doing any good.

## 32. Observation.

**Y**OU must never *Prune* a *Branch* for *Wood*, when you have no such occasion for it; and therefore, for Example, when a high *Standard* begins to be press'd by the Neighbourhood of a lower *Tree*, so as to be partly necessitated to cut off some of the lowest *Branches* of that high *Standard*, to make room for the highest of its Neighbour; in such a Case, those *Branches* of the high *Standard* must be left long for *Fruit*, especially if it be vigorous, and can nourish these without prejudicing the principal *Branches*: And thereby Endeavours are us'd to get some *Fruit*, by the extraordinary length of such *Branches*, before one be necessitated to cut them off quite.

## 33. Observation.

**W**E must cut *Stump-wise*, that is, entirely, all the thick *Branches* that are shot from the Extremity of another passably thick and long, which, if *Prun'd* according to the common Method of *Pruning*, would grow too naked, and too long; and consequently, would look disagreeable. By this manner of *Pruning Stump-wise*, we may commonly hope for some new *Branches* from the Body of the old one, proper to maintain the Beauty of the Figure, in filling up every part.

## 34. Observation.

**W**E likewise cut *Stump-wise* when, upon a very vigorous *Tree*, of two strong *Branches*, grown on the Extremity of a vigorous one, we think fit to use the Second preferably to the First, and yet do not think it proper to strengthen that Second any more; and so we leave, for the space of a Year or two, or more, a small passage for the Sap to the highest cut *Stump-wise*, in order to take it quite away, as well as the new *Branch* that shall be shot from it, as soon as the *Tree* shall begin to bear *Fruit*.

However, I must confess, that the most common Use that is made of that way of *Pruning Stump-wise*, is seldom for any *Branches*, but such that, from weak, and passably long as they were, are grown extraordinary thick and vigorous; inasmuch that they have shot from their Extremity one, or two, or many thick *Branches*. The original Weakness of such *Branches* only proceeded from their length, which should not have been allowed them, had they been as thick as they are grown since; and therefore, being grown thick, they must begin to be us'd like *Branches* for *Wood*; that is, they must be shorten'd.

## 35. Observation.

**A**ND in case that *Branch* cut *Stump-wise* has produc'd no *Branches* for *Wood* in its Extent, especially drawing near to the place whence it proceeded, and on the contrary, has shot a thick *Branch* at the place of the *Stump*, or close by it, this last thick one must again be cut *Stump-wise*, especially the old one not being too long; for if it be too long, and has not been shorten'd at a proper time, the *Pruning* must be perform'd upon the Body of that old one, and consequently shorten'd, according to the Rules heretofore establish'd.

## 36. Observation.

**I**F on an old, but pretty vigorous *Tree*, altogether disorder'd with false *Wood*, barely by the defects of an ill-perform'd *Pruning*, Care be not taken for three or four Years, one after another, to take it lower, by a *Branch* or two yearly, until it be quite shorten'd, it will never yield any satisfaction; but by that means it may very well be brought to be a fine and good *Tree*. This is fit to be done, when a *Tree* is of a very good kind: If not, it were better to take it quite down, and to *Graft* a better kind upon it *Slur-wise*, either of such as we have not already, or have not a sufficient number of.

## 37. Observation.

**S**ometimes certain *Trees* are so vigorous, that they cannot, especially the first Years, be reduc'd to a small compass; therefore they must be allow'd to extend either upwards, or on the sides; otherwise they will only produce false *Wood*: Afterwards you may by degrees reduce them to the *Standard* of others, when they begin to bear *Fruit*. Such are commonly, *Virgouli*, *Lady-Thighs*, *Saint-Lexin*, *Robine*, *Roufflets*, or *Russetings*, &c.

## 38. Observation.

A Very vigorous *Tree* can never have too many *Branches*, provided they be well order'd, and cause no Confusion; whereas, on the contrary, a weak *Tree* can never have too few, that the Burthen may be proportion'd to the Vigour of it; and therefore you must seldom leave any upon it, but such thick *Branches* as it may have.

## 39. Observation.

THE *Branches* of false *Wood*, or *Suckers*, as to *Peach-Trees*, and other *Stone-Fruit*, are not commonly so defective as to the *Eyes*, or *Buds*, as those that grow upon *Kernel-Fruit-Trees*; but are more subject to perish, and to have their *Eyes* extinguish'd with *Gum*, which is a peculiar Dis temper to them. As for the *Pruning*, they must partly be manag'd like the *Branches* of false *Wood* of *Pear-Trees*, when they are but in a small number upon a *Tree*; but when there are a great many on the lower part of a *Tree*, they must be look'd upon as proper to renew that *Tree*; and therefore, a considerable length must be allow'd to some, in order to take them away when the fury shall be over; and in the mean time, those that shall be pitch'd upon for the Foundation of the Re-establishment of a fine Figure, must be *Prun'd* according to the common Method. We seldom meet with this abundance of thick *Branches* upon any but *Peach-Trees*, especially *Stone-Peaches*, which begin to grow ancient, and worn out about the head.

## 40. Observation.

ALL manner of *Trees* have a *Branch* or two predominant over the others, and sometimes more; happy are those in which the Vigour is divided, unhappy those where the Torrent lies all on one side.

## 41. Observation.

A *Wood-Branch*, growing on the in-side of a *Dwarf* which you intend to close, is ever welcome, and the same, if favourably plac'd to supply a thin side.

## 42. Observation.

Fruit-Buds of *Pear* and *Apple-Trees* sometimes form themselves the very same Years in which the *Branch* they are adherent to has been form'd, as generally all the *Buds* of *Stone-Fruit* do; but sometimes there are some that are two or three Years, and even longer, before they come to perfection: Some arrive to it at the Entrance of the Spring, so that it happens that some may be seen at the time of the Blossom, which did no wife appear during the Winter.

## 43. Observation.

THE Extremities of the *Shoots* that come out when Autumn is almost spent, especially after a great Cessation of *Sap*, which happens sometimes, are always bad; their Colour, which differs from the rest of the *Branch*, shews it sufficiently; and so, being good for nothing, they must be taken off, being likewise subject to perill: Gard'ners call them *Branches* of *August*.

## 44. Observation.

WE say, and with reason, that it is commonly in our power to make *Fruit-Buds* grow where we please; but it is not always so soon as we could wish.

## 45. Observation.

When it comes to pass that a thick *Branch* being *prun'd*, shoots three, of which, the highest proves of a good thickness, the second weak for *Fruit*, and the third thicker than the highest, two Considerations must be had to *Prune* them skillfully; that is, if the highest be fit enough for the Figure, it must be made use of, and the third, which is thicker, cut slantingly, or within the thickness of a Crown-piece.

But if this third *Branch* be better plac'd for the Figure, it may be *Prun'd*, as being a *Branch* for *Wood*, and the highest left for a *Fruit-Branch*, or rather for one of those that must be remov'd within a certain space of time, supposing it causes no Confusion, and that

that the *Tree* is very vigorous; for if it causes a Confusion, or the *Tree* be but of an ordinary Vigour, it must only be cut *Stump-wise*, for fear of losing the disposition which the weak one had for *Fruit*, if we should wholly take away the highest over the weak one.

## 46. Observation.

IT is always a happiness, especially in *Stone-Wall-Fruit-Trees*, when from the lower part of the thick *Branch* there shoots, that very Year, another thick one. Our *Trees* are commonly but too much inclin'd to shoot upwards.

## 47. Observation.

YOU must never, upon any Consideration whatever, preserve your sapless *Branches*; not even if they were on the top of the *Pruning* of a vigorous *Branch*.

## 48. Observation.

When *Dwarf-Pear-Trees* of *Bourré* bear *Fruit*, they must commonly be *Prun'd* shorter than other *Trees*, by reason that as they produce a great deal of *Fruit*, and that that *Fruit* is large and heavy, they are apt to open, and spread too much; which Figure is not pleasing.

## 49. Observation.

During the Month of *May* one cannot be too careful in looking after *Espaliers*, especially *Pear-Trees*, to hinder good *Branches* from slipping behind the *Stakes* or *Props*, from which they cannot be remov'd afterwards, without either breaking them or the Lattice-frame.

## 50. Observation.

A Young *Pear-Tree* languishing or decaying in one part, may sometimes be re-established, if, after having taken it out of the *Ground*, and *Prun'd* it every where, it be put into better *Ground*: But there is no help for a decaying *Peach-Tree*, especially *Gum* having appear'd upon it; those kind of *Trees* seldom are reviv'd.

## 51. Observation.

IF it happens that any *Dwarf*, planted within the space of three, four, or five Years, or of a longer standing, not having been well order'd in the *Pruning*, in order to form a lovely Figure; or perhaps having been spoil'd by some unexpected Accident, so as to be grown lower and thinner on one side than the other; if, I say, it happens fortunately that such a *Dwarf-Standard* does shoot out of that defective side a *Branch*, which being thick, though of false *Wood*, may seem proper to correct the defect aforesaid, as it happens sometimes; in such a Case it is fit to allow such a *Branch* a greater length than my Maxims have for the general regulated for *Branches* of false *Wood*, to the end that this *Branch* being equal in height to those of the other side, the Figure of the *Tree* may acquire the Perfection it wanted. The defect of extraordinary length in a *Branch* is not certainly so great as that of being crooked, flat, or slender, which it has now corrected in a *Dwarf-Standard*.

## 52. Observation.

ALL the *Sap* of a *Tree* being employ'd in forming many *Branches*, some strong, others weak, it will probably soon produce *Fruit* upon the weak ones: But when it abounds, and is confin'd within a very small number of *Branches*, for the most part thick, it will produce no *Fruit* any where, until the great Vigour of it be in some manner walled by the great number of *Branches* it will produce in Succession of Time, which *Branches* must be preserv'd.

## 53. Observation.

When *Trees* are hard to produce *Fruit*, by reason of their being too Vigorous, as those are we have so often mention'd; especially certain *Plumb-Trees* that grow against a *Wall*, one of the things I commonly do affect, is to leave a great deal of old *Wood* upon them, particularly for *Fruit-Branches*, avoiding, however, Confusion and Thinness, or Vacuity; but still, upon Condition, that when a *Branch* left long for *Fruit* the first Year,

year, shall afterwards shoot another on the Extremity of it, which I likewise think fit to preserve; upon Condition, I say, that in case that Second should shoot a Third, the last must never be preserv'd, which would cause a disagreeable length, and yet would not answer our aim, which is to get *Fruit*.

In such Occasions I do one of these things, *viz.* I perform my *Pruning* upon the Second, the two having a sufficient length; or else I *Prune* the Third, which is shot from the end of the Second, *Stump-wise*, the two first not being excessive in length.

54. *Observation.*

There are some moments in which a Skilful Man's Thoughts may be roving while he is *Pruning*, and so may chance to commit some Faults, which commonly are not very material, and are easily Corrected; as for Example, having left some *Branches* too long, or having preserv'd some that should have been taken away; therefore in my Opinion, a Revise is very necessary to be done the next day, if not that very day; without which, it is impossible to be fully certain of what has been done; it is with this, as with all other Works in the World.

55. *Observation.*

When one side of an Old *Tree*, either *Dwarf*, or *Will-Tree*, is extraordinarily Strong and Vigorous, and the other weak and slender; that is, properly speaking, when a *Tree* is Crooked, and disagreeable to sight, it is hard to reduce it to a fine figure; then a great deal of care must be taken about that Vigorous side, in taking away the greatest part of the strong *Branches* close to the *Stem*, whence they shoot, or cut part of them *Stump-wise*, in expectation that at last the *Sap* which inclin'd altogether on that side, may turn it self towards that weak side, at which time we shall be enabled to begin the Repairs which were wanting.

56. *Observation.*

In all sort of *Trees* care must be taken to allow less length to a *Wood-Branch*, that is somewhat weak, than to that *Wood-Branch* which is thick and strong.

57. *Observation.*

It is pretty common in all manner of *Trees*, especially when they are pretty Ancient, to find certain weak *Branches*, which, without having ever born any *Fruit*, are, as it were, threaten'd to perish for want; therefore it is requisite every year, at the time of the grand *Pruning*, and even at the time of the second, which is perform'd on *Stone-Fruits*, especially *Wall-Fruit*; I say it is requisite to take a special Care that such *Branches* may not be without Nourishment; to which end, they must be kept shorter, and the number of them diminish'd, and sometimes it will be fit to take away some of the thick ones that are Superior to them; or, if after such *Branches* have *Blossom'd*, that is, have perform'd the main part of their duty, their *Blossom* happens to perish, they must be wholly taken away, especially when there appears no disposition in them to shoot some good *Branches* for the following year.

58. *Observation.*

When a High *Branch* is taken away over a Lower, that is, as we have already said, what we call Lowering, or Shortning of a *Tree*, it must be cut so close, that no part of it may remain; to the end that the place may soon be cover'd again, and neatly; but when the lower is taken away to preserve the higher, we must keep of that low one, at least the thickness of a Crown Piece, or cut it slantingly, as we have said elsewhere, in hopes of a good new *Branch*.

59. *Observation.*

When a *Branch* of a good thickness being *Prun'd* pretty close, produces nothing but what is weak on its Extremity, it is a Sign that it is upon perishing, and that Nature has withdrawn, in favour of another, the yearly substance she us'd to afford it; so that you must no longer rely upon it for the Beauty of the *Tree*.

60. *Observation.*

If a *Tree* being crooked at the time of *Planting*, produces the first year a fine straight *Branch*, as it sometimes happens, you must shorten the whole *Stem* to that *Branch*, there only to fix the Foundation of the Beauty of that *Tree*.

61. Ob-

61. *Observation.*

WE may better resolve to preserve upon a *Wall-Fruit-Tree*, a thick *Branch*, not being altogether well plac'd, than upon a *Dwarf-Standard*; where such a *Branch* might chance to be ill situated, by reason of the facility we meet with in *Wall-Trees*, of turning and winding such a *Branch* at pleasure, or those that shall shoot from it, which cannot be effected in *Dwarf-Standards*, in which we want the Convenience of tacking to the Right and Left; and such a *Branch* would make a *Dwarf-Standard* show awry: Therefore in a *Dwarf-Standard* such a *Branch* must be remov'd, whereas with the assistance of *Ligatures* it might serve to form a fine *Wall-Tree*, and therefore should be preserv'd.

62. *Observation.*

THE common length of *Branches* for *Wood*, which I willingly fix to five, six, or seven inches, tho it is to be regulated and proportion'd upon many things, in order to be either more or less extended; for Example, upon the Vigour or Weakness of the whole *Tree*; upon the Thickness or Mediocrity of the *Branch*, to be longer where it meets with Vigour and Thickness, and shorter where it does not meet with it: This length is likewise to be regulated upon the Vacuity that is to be fill'd, to be either more or less long, according as the Vacuity is either great or small: It must particularly be regulated upon the height of the other *Branches* for *Wood* of the same *Tree*, to the end, that those that are newly *Prun'd*, may be proportion'd to the Old ones.

63. *Observation.*

There are some People who fancy that the *Pruning* of a *Tree* does not require much Art; to justify which, they cite Great *Trees* that are never *Prun'd*, as also the *Trees* of certain Gard'ners, who, without ever having known how to Cut, *Prune* so happily, that they do not fail of having abundance of *Fruit*.

I have no answer to make to those People, or rather I have so many things to say, that I do not think it worth my while to answer them. Physicians, Lawyers, and most of the Learned in most Arts, sometimes in their turns, meet with such pretended Objections.

64. *Observation.*

When a Fine *Fruit-Branch* shoots many others, which likewise seem fit for *Fruit*, I am for preserving of them, when they cause no Confusion, and the *Tree* is Vigorous, particularly in *Pear-Trees*.

65. *Observation.*

It happens sometimes, especially in *Wall-Fruit-Trees*, that within the Compass of a *Branch*, which grows Thick and Vigorous the very Summer in which it is produc'd; I say, it happens sometimes, that one or two Thick ones form themselves, which are as it were after Shoots; so that whatever is beyond those New-comers, drawing towards the Extremity, appears incomparably smaller than what is on the other side, drawing towards the Birth of that Mother-*Branch*; in such a Case, those last Comers must be look'd upon as *Branches* that commonly will always augment in Thickness, and consequently will become real *Branches* for *wood*, in the place where they are; for which reason, they must be *Prun'd* short; and as for those that draw towards the Extremity, they must be look'd upon as *Fruit-Branches*, which will thicken no more, Nature having directed her Course upon these last made.

66. *Observation.*

YOU must not in the least scruple the taking lower, even in old *Trees*, especially *Pear*, *Apple* and *Apricot-Trees*, certain Sides which, having been ill order'd, prove too long and thin: But I would not, without an absolute necessity, have many thick *Branches* cut over a very weak one, shot from the same part, though never so well plac'd for the Figure; too many Inconveniences arising from it, by reason of the false *Wood* that commonly grows about that weak *Branch*; which not being capable of receiving all the *Sap* that flows towards it, and was destin'd for the Nourishment and Maintenance of those  
superiour

superior *Branches* that shall have been cut, that *Sap*, being necessitated to come out, and consequently to force its way in an extraordinary manner, not finding any Issue ready made; that *Sap*, I say, being very abounding, flows out of it disorderly and furiously, like Water having overthrown a Dam that stop'd its Course. Now all those forc'd and violent Issuings produce those kind of *Branches* we have heretofore explain'd, giving them the name of *False Wood*, or *Suckers*, and are such as do not grow in the most common and ordinary Order Nature follows in the Production of new *Branches*; and therefore it is fit, as much as possible can be, to avoid falling into such Inconveniencies.

But if you chance sometimes to be necessitated to cut such thick *Branches*, the small *Branch* not performing here the Operation of a cleft *Gruff*, which sometimes it does, but often fails, in such a Case you must resolve to make use of one of the *Branches* of *False Wood* shot from it, and chuse that which is best plac'd, *Pruning* it according to the common Method, and by that means establish upon it the Figure of the *Tree*.

## 67. Observation.

**A**lthough the *Branches* that, according to the Order of Nature, shoot from the Extremities of other *Branches* are commonly of good *Wood*, yet some of them happen sometimes not to be so; especially growing from the lower part of *Branches*, which, being originally of *False Wood*, have been cut very short, or shooting from a *Stump*; or else, when in the very Year they only begin to shoot a long while after the others of the same *Tree*, (this happens but seldom, unless in *Virgoule-Pears*,) which you must not wonder at, and only *Prune* those kind of *Branches* that appear ill-condition'd, leaving them of a moderate length; for you must seldom allow much length to such *Branches* of *False Wood*.

## C H A P. XXX.

*Particular Remarks for the first Pruning yearly to be Perform'd in February, and March, upon Trees of Stone-Fruit, especially on Peach and Apricock-Trees, either Dwarf-Standards, or Wall-Trees.*

**I** Shall not need to enlarge upon this Article, of the first *Pruning*; having already largely explain'd in General the Rules for all sorts of *Pruning*: I shall only observe, that the *Fruit-Branches* of the *Trees* above-mention'd, are but of a small Continuance, many of them Perishing the very first year in which they have produc'd *Fruit*, and even without it, their *Blossoms* having been spoil'd, either by *Gum*, *Blasts*, or *Frosts* in the Spring; in which Cases, they must be wholly taken away, unless they be grown considerably thick, or have shot some fine *Branches* fit to bear *Fruit* the following year; for in that Case, they may last two years, and even sometimes, though very seldom, three or four; provided they still shoot some good *Branches*, either on the Extremity of the last *Pruning*, or in their extent: But after that, they must only be look'd upon as worn-out *Branches*, and consequently of no use.

It is not so with the *Fruit-Branches* of *Pear* and *Apple-Trees*; and even *Plumb-Trees*, both the one and the other lasting pretty long, that is, much longer than those of *Peach-Trees*, by reason, that in their extent they shoot very good small ones, which regularly produce *Fruit*; until at last, according to the Nature of *Fruit-Branches*, they all perish intirely.

I may say here, without any Vanity, that in following my Method of *Pruning Peach-Trees*, you may expect to have commonly much finer *Trees*, more lasting, and without doubt much more *Fruit*, and even much finer than those who *Prune* another way, which is Infalible; provided the Weather be fair at the time of the *Blossom*, and the *Gum* spoil nothing about the *Branches*, and especially, that the *Trees* be Planted in a good Ground. The Curious are much to be pity'd, when their *Gardens* happen to be in a cold ill Ground, or when the Mould is worn, because that the *Trees* seldom produce any good new *Roots* there; and consequently, abundance of the old ones perish, *Roots* not being able to subsist without Action; which is the Reason that so much *Gum* grows both upon the *Stem*, and upon the *Branches*, and even upon the Foot, and in the *Roots*.

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The Reason for which I say that my Method of *Pruning* greatly preserves and imbellishes the *Trees*, is because it prescribes the being very careful in keeping pretty short all the thick *Branches*, &c. And as for the abundance of fine *Fruits*, it depends infallibly on the other Caution I recommend, of preserving all the good *Branches* for *Fruit*, without taking away any, and the leaving no more *Fruit* upon them than they are able to nourish, in order to its being very Beautiful.

When in the Months of *February* and *March*, you design to perform the first *Pruning* upon *Peach-Trees*, and that, after having taken away all the Old dry *Branches*, or such, which, through an extreme weakness, are of no use (for you must begin by this, in order to see clearly and distinctly what is to be done) you find only two sorts of good *Branches* remaining; of which, the one (which are weak ones) are to bear *Fruit* the following years, the *Buds* being already form'd; and the others (which are the strong ones) are not commonly to produce any, not having any *Buds* upon them, but are to serve us for another use, which is very material.

These weak ones are to be preserv'd with Care, and even of a great length, by reason of the visible appearance of present *Fruit*, but without building any hopes upon most of them for the following year; Nature will afford us others, to supply the loss of those; but still care must be taken, that the length of those *Branches* be proportion'd to their strength; being also perswaded, that a *Branch* of an ordinary thickness is capable of nourishing a considerable part of the *Fruit* it seems dispos'd to bear: So that, at the first *Pruning*, there is no danger in venturing to leave much upon it, provided part be taken away at the second, if there be Reason to believe there is too much.

As to the strong ones, they must particularly be look'd upon in relation to the future, and therefore must be cut short, in prospect, that, according to the Order of Nature, they will produce others of two kinds; some thick ones for *Wood*, and many small ones for *Fruit*; which will certainly come to pass: But, above all, Care must be taken to provide for the *Branches* that are to fill up the room of those slender ones, which, for the time being, produce so good an Effect, but are, as it were, no longer to be look'd upon as living, since, after their having produc'd their *Fruit*, they must be taken away.

We have sufficiently explain'd the difference there is between weak *Branches*, and *Saply* ones; therefore it will suffice to say, that no long *Branches* must be preserv'd, unless they be of a moderate thickness, and have at the same time *Fruit-Buds* ready form'd for the present Year. I commonly call none *Buds* but such as are double, with an Eye for *Wood* in the middle; and I value no others for Preserving, unless it be on *Troy-Peaches*, and early *Peaches*.

Moreover, no *Branch* must be *Prun'd* short, unless it be, that, being incapable of bearing *Fruit* in the present Year, their Strength or Vigour may promise other *Branches* for the following Year; or that the *Tree* having a vast quantity of *Fruit-Branches*, and very few for *Wood*, and all those very high, there may be reason to fear, that some of the lower parts, or the middle, may grow too thin for the following Years; in which Case, it is very proper to sacrifice some *Buds*; and to that End, shorten some of the finest and thickest among those that are over-burthen'd by them, and so make them, as we have said elsewhere, *Demy-Branches* for *Wood*, which is of very good use.

In the mean time we must observe that there are some very vigorous *Peach-Trees*, which commonly are hard to bear *Fruit*, upon which it is necessary, as well as upon some furious *Pear-Trees*, to leave *Branches* of a moderate thickness, long, though they have no *Fruit-Buds* at all. Such furious *Peach-Trees* are your *Magdalens*, some white *Bastard-Peaches*, *Bourains*, *Brugnons*, or *Latter Violets*, &c. that is, when those *Peach-Trees* are young: Upon such it is necessary to leave some long *Branches*, though without any appearance of *Fruit*, upon the apparent certainty of their producing a great many other weak *Branches* for the following Year; and though those *Branches* be pretty thick, and might be look'd upon as *Branches* for *Wood*, yet they are not cut short, because it is probable that in their Neighbourhood there may be other thicker that have been *Prun'd* for *Wood*, and that, according to the best Rules, many thick *Branches* must never be left very near one to another.

Those different ways of Cutting long or short, are the Cause that it cannot, and must not be said that a *Peach-Tree* is well *Prun'd*, unless every *Branch* has one of those two Properties, either actually fit to bear *Fruit* in the present Year, or to produce fine *Wood* the Year following, in those places where it may be requir'd; and when these two Conditions meet, and are perfectly observ'd, we may say that a *Peach-Tree* is very well *Prun'd*.

Those kind of Regards must not only be had at the time of the first *Pruning*, but, yet particularly, at the time of the second and third, if perform'd; and likewise at the time of the *Trimming* of the *Buds*, and useless *Branches*.

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The Mischief which attends *Gum*, to which every body knows *Peach-Trees* are commonly subject, and even much beyond all other *Stone-Fruits*, hinders us from having any certainty that a thick *Branch*, being *Prun'd*, will produce others on its Extremity; which is almost infallible in *Pear*, *Plumb*, and *Apricock-Trees*, &c. When *Peach-Trees* appear attack'd with that *Gum*, and yet the Owners are willing to preserve them some Years longer, they must *Prune* them late, that is, about the time they begin to *blossom* and *shoot*, to be certain of preserving, at least, some good *Eyes*, and some good *Blossoms*: There can be no Certainty before that time.

I add farther, that when a *Peach-Tree* has produc'd no *Branch* for *Wood*, it must no longer be consider'd as a *Tree* to keep, from the time the *Fruit* has been gather'd; and a Successor must be provided.

I add besides, that if it happens that an old *Peach-Tree*, having been shorten'd, has produc'd several *Branches*, which happens but seldom, unless it be a *Tree* grown from a *Stone*, you must begin to *Prune* it upon those new *Branches*, in the self-same manner as a young *Tree* is *Prun'd*; excepting only, that the *Branches* must be left a little longer, for fear of the *Gum*.

It is almost impossible not to be very uneasy at the *Pruning* of *Peach-Trees*, either *Dwarf-Standards*, or *Wall-Trees*, by reason of an itching desire of preserving all the *Buds* that are ready form'd for the present Year, and of not depriving ones self of a present Good: But yet, unless you be a little hard-hearted for the present, in prospect of the future, you may assure your selves to see those kind of *Trees* perish by your own Fault, or, at least, become of no use. 'Tis true, that in so doing, you may perhaps get abundance of *Fruit* for two or three Years; but it is as true, that after that, you must expect a very great Scarcity, and very ugly *Trees*.

Those Uneasinesses, or Conflicts, I have mention'd, are only undergone by skillful Gard'ners: Others are not so much as sensible of the Danger, and so are liable to no manner of Agitation. The chief Cause of Disquiet is, particularly, when a weak *Branch*, that had been left long for *Fruit*, is grown thick, contrary to the common Order of Vegetation; and that the thick one, which had been cut short, in order to *shoot* abundance of new ones, is, as it were, abandon'd, and hardly produces any thing. This Alteration generally produces a great Disorder in a *Tree*; for those kind of *Branches* that are grown thick, have probably shot a great many *Branches* for *Fruit*, which occasions a very great and just Cause of Temptation and Desire of preserving them all: So that, unless the Desire of having a fine and lasting *Tree* opposes the Itch of preserving those Appearances of present *Fruit*, there is a great deal of danger of being overcome by the Temptation; and consequently, of making soon a very ugly *Tree*, as we have already instanc'd. Therefore it is very material to examine what is most proper to be done in such Conjunctions.

It is sometimes necessary to take the advantage of such a Disorder, to let the *Tree* *shoot* up, in order to cover the Top of a Wall, which may very well be allow'd of; and in such a Case, there will be no need of taking any of these terrible Resolutions: But sometimes there may be a great deal of danger in so doing; in which Case, there is a necessity of resolving to sacrifice part of those fine Appearances of *Fruit*, without any Mercy, and consequently, to shorten such *Branches* extremely, in prospect, that in the following Year you shall be recompenc'd a hundred times for those *Fruits* which, as I may say, have been thus cruelly destroy'd. This Disorder happens but seldom, which is a Comfort; but yet, as it happens sometimes, I thought my self oblig'd to give my Opinion about it.

When Walls are very low, for Example, about six or seven Foot high, and yet People desire to have *Peach-Trees* against them, which, in such a Case, must be *Planted* at a great distance from one another; when, I say, along such low Walls *Peach-Trees* appear to be very vigorous, for the two first Years the thick *Branches* that are to fill up the Sides must be kept pretty long, because, that in *Pruning* of them short, they will only *shoot False-Wood*, or *Suckers*, and seldom or never produce any *Fruit*, you may allow them twice the length of what is allow'd to common *Wall-Trees*, and sometimes even thrice; that is, a Foot and a half, or somewhat more.

When a *Wall-Tree* is reasonably vigorous, it must of necessity be allow'd at least three Foot of Wall free, above the *Pruning* that is perform'd upon it in the Spring, for the placing of the new *Shoots*; otherwise the greatest part of the principal *Branches* should be of no use, growing over the Top; and there should be a necessity of Cutting them often during the Summer, lest the great Winds should break them: And, besides the Vexation of not enjoying the Benefit of the Vigour of ones *Trees*, those *Branches* thus cut, ever look ungainly upon a *Wall-Tree*, by the quantity of *Furzes* that appear at the Extremity of such a *Tree*.

## CHAP.

## CHAP. XXXI.

### Particular Remarks upon the Second and Third Pruning of Stone-Fruit.

These Second and Third *Prunings* are altogether new, and yet are altogether as necessary and material as the first, and must be perform'd about the middle of May only upon weak *Branches*: They were left long by the Winter-*Pruning*, in prospect of abundance of *Fruit*; but whereas they are subject to certain Circumstances we are going to examine, they made us bethink our selves of the necessity of a second Operation, and sometimes of a third.

As to the thick *Branches*, that have been *Prun'd* short in February or March, they have sufficiently undergone the Dispensation of the *Knife*, they require no more of it, their Function not to produce any thing that wants Retrenching at this time; but, on the contrary, to *shoot* many precious *Branches*, that deserve to be preserv'd with much Care.

These last *Prunings*, we are now explaining, are of great use for the grand *Pruning* that is to be perform'd the following Year, in cleaning a *Tree* from all superfluous and half-dead *Branches*, which wou'd only create a Confusion: They Strengthen other *Branches* that will be of use in the Sequel, by affording them the *Sap*, which wou'd be wasted on those scurvy ones that can never be of any use, and must of Course be taken away the Winter following. It likewise contributes towards the Beauty and Goodness of the *Fruit*, and serves to keep a *Tree* equally well furnish'd; so that, by that means, seldom, or never, any Defects wou'd appear upon any of those *Peach-Trees*, unless they were persecuted by that cur'd *Gum*.

These are the Consequences of those kind of *Branches*, upon which the above-mention'd *Prunings* are perform'd. I desire all Gard'ners to follow this Discussion exactly.

These *Branches*, which I have a particular regard for, in relation to *Fruit*, shall have perform'd one of these six things.

First, They may either have produc'd, almost in their whole Extent, a great deal of *Fruit* and fine *Branches*, or much *Fruit* and ugly *Branches*. By fine *Branches* here, I mean, such as are thick enough to prove *Fruit-Branches* the following Year, and in the mean time bear abundance of fine *Leaves*: And, on the contrary, I call those poor and ugly, that are short and slender, and are incapable of bearing *Fruit*, only producing small *Leaves*.

Secondly, Those *Fruit-Branches* may chance only to have born *Fruit* upon part of their Length; for Example, the fourth part, third, or half, &c. and to have shot either fine or ugly *Branches* every where, or in some part; and all this, perchance, towards the upper end, and sometimes towards the lower.

Thirdly, They may chance to have produc'd no *Fruit*, but abundance of fine *Branches*; or many altogether ugly and useless.

Fourthly, They may only have produc'd a single *Branch* on the Extremity, with abundance of *Fruit* every where, or without any *Fruit* any where.

Fifthly, They may only have produc'd one single *Fruit* on the Extremity, with some *Branches* in part of their Extent.

Lastly, They may be kill'd with *Gum* or Cold in their whole Extent, or only towards the Extremity.

I have had the Experience of all these Cases several times, in all which I have held the following Method.

In the first part of the first Case, in which the *Fruit-Branches* shall have produc'd *Fruit* and fine *Branches* in the best part of their Extent, we may rejoice at the Abundance; for, without doubt, all will go well, since the Appearances are so fair as far as the Month of May: Some of the *Fruit* only must be taken away, where it lies so close, that we may have cause to believe that, in growing, they might obstruct each other; for that wou'd spoil it: And likewise, in case any Confusion be threaten'd by that Multitude of new *Branches*, some of the meanest, and worst plac'd, may be remov'd. It is always to be with'd, that the Lot of being retrench'd may fall upon the farthest.

In the second Part of the first Case, in which the *Branch* has produc'd a great deal of *Fruit*, but no fine *Branches*; on the contrary, all weak and useless; the best part of the *Fruit* must be taken away, since it wou'd neither grow beautiful nor good; only some of that which looks best, and is best plac'd, may be preserv'd; that is, that which grows in the

the lowest part of the *Branch*. At the same time the said *Branch* must be very much shorten'd, to reduce it to the second or third *Eye* or *Bud* of the bottom, in order to strengthen some of the best *Branches* that are upon it, for the next Year.

In the second Case, in which the *Fruit-Branch* only produces *Fruit* upon part of its Length, if the *Fruit* be grown upon the lower part of it, the *Branch* must be preserv'd, and shorten'd close to that, among the new ones, which appears finest, and nearest to that *Fruit*; it is enough when there remains one or two passable good ones.

In case the *Fruit* be pretty abundant, and towards the upper Extremity, that having likewise pretty fine *Branches*, that *Fruit* must likewise be preserv'd, and all the useless *Branches* remov'd, in the manner above said; only preserving one or two of those that appear the finest, whatever part they be in, especially being in the lower part, where we are always desirous of them; for, as to the *Fruit*, 'tis always well plac'd, where-ever it be, even at the end of the *Branches*; provided always, that in preserving one or two fine *Branches* on the Extremity of a *Fruit-Branch* that has been kept of a great length, you must resolve the following Year to retrench both the Mother and Daughter, or Daughters, otherwise one part would grow too thin.

In the first part of the third Case, in which the *Branch* has really produc'd no *Fruit*, but, to make amends, has shot a great many fine new *Branches*; in such a Case, I say, it is fit, as much as can be, to preserve the best of those *Branches*, being careful of not letting any of them grow stronger than the other, especially towards the Extremity, for such a *Branch* would ruin all the lower; therefore such a *Branch* must be wholly taken away, and *Pinch'd* or broken within two or three *Eyes*, or *Buds*, as we have heretofore explain'd.

In the second Part of that third Case, in which the *Fruit-Branch* has neither been fortunate in *Fruit*, nor in *Wood* of a favourable Growth, you must wholly shorten such a *Branch*, to a single one of those it has produc'd; and chuse the lowest, in hopes to strengthen it, to make it good for the next Year, or take it quite away, it not answering our Intentions.

In the first Part of the Fourth Case, in which the *Fruit-Branch* has only produc'd a single *Branch* on the Extremity, with abundance of *Fruit* every where, I am of Opinion that such a *Branch* should be preserv'd, provided it does not incline to become a *Branch* for *Wood*, in which case it must be broken pretty short: So that, in case such a *Branch* be but moderately thick, it promises much for the following Year; and as for all the little diminutive *Branches*, that grow among the *Fruit* it bears, we *Prune* them, as we have declar'd in the Exposition of the second Case.

Therefore there is yet more reason to use all the little *Branches* we meet with here without *Fruit* in the Extent of the *Branch* in debate in the same manner, being certain that, for the generality, they shoot no more, being all at a stand in the Month of *June*: So that all our Comfort for the following Year lies in the fine *Fruit-Branch* that offers it self here, on the Extremity of the *Branch* that has blossom'd to no purpose in all its Extent.

In the fifth Case, in which the *Branch* that was left long, to bear a great deal of *Fruit*, has yet been so unfortunate, or abus'd, as not to have retain'd above one or two on the Extremity of it, and yet has shot some *Branches* in part of its Extent.

Several particular Regards must be had in this Case: For Example, If the *Tree*, on the other hand, has but little *Fruit*, for that being one will be tempted, and that with reason, to preserve that which is known to be good, in such a Case it will be proper not to meddle with such a *Branch*; or else, to observe whether the *Tree* has produc'd a great deal of *Fruit* in the main; in which Case, no great difficulty must be made of losing so little, and consequently, of *Pruning* such a *Branch* again short, in order to strengthen some other that appears pretty good, and is well plac'd; which we may stand in need of for the Beauty of the *Tree*, and for the hopes of future Years.

It will likewise be proper to consider whether the Year be universally barren, which would hinder the Operation I have been advising; or whether it be a doubtful *Fruit*, of which, it would be necessary to know the kind, either to suppress, or multiply it, &c. In which Case, it will be fit to preserve this single *Peach*, or those two *Peaches*, that are remaining on the top of the *Branch* in question, though with some Regret, out of a just fear of a future Deformity in that *Tree*.

For, in fine, the principal thing to be done in the Management of *Peach-Trees*, is, to prefer the Beauty of the whole *Tree*, in hopes of a future Abundance; I say, to prefer the Beauty of that *Tree* to a small quantity of *Fruit*, though really present.

In fine, In the sixth Case, in which the *Branches* are destroy'd by *Gum*, or Cold, it is neither difficult to give a good Advice, or to take it; for you must wholly take away all that is dead, and consequently useless, and disagreeable to Sight, in any part whatever, particularly on the Extremity.

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This is my Method for the Second *Pruning*. If any thing has hinder'd the performing of it about the middle of *May*, it may be done until the middle of *June*; so that even a Third may be perform'd at that time, when on the Second of the middle of *May*, it has been thought fit to venture still some Lengths of *Branches*, and some *Fruits*.

It is likewise an Effect of the Second *Pruning*, to cut all the small, triple *Branches*, that grow within the compass of the line one, which has been produc'd that very Year; as also, to shorten, in *September*, the *Branches* of *Peach-Trees* that are weak, and at a stand.

I add, that the performing of such an Operation is very material, but that unfortunately it is hardly practis'd at all, or, at least, so seldom, either out of Laziness, or for want of time; the *Gardner* having, perhaps, too great a number of *Trees*, and other Works, that overwhelm him.

## CHAP. XXXII.

### Of the different Manners of Ordering a Peach-Tree in the Summer-time.

**I** Observe, among *Gard'ners*, three different Methods of Ordering all manner of *Peach-Trees* in the Summer, in relation to the young *Branches* they produce. The First tear or pull off indifferently all those that grow before and behind; and leave but few others: Those seem to me extremely to blame, and unworthy the Prolfection they follow.

The Second cut all those *Branches* within three or four *Eyes*, or *Buds*, and by that means occasion abundance of *Fruit*, among which there sometimes grows a little *Fruit*, but that is pretty rare: Besides that, this Method renders the *Trees* ugly, and disagreeable; and therefore I disapprove it.

Lastly, The Third preserve in the Summer all the good *Branches*, and *Pallisado* them neatly; tarrying to chuse the best until the Season of *Pruning*: Those, in my Opinion, are in the right, and I imitate them as much as I can.

## CHAP. XXXIII.

### Of the Trimming of superfluous needless Buds and Sprigs.

**W**hereas *Pruning* only serves barely to shorten, or wholly to take away some old *Branches*, that, either by their length, situation, or number, annoy a *Tree*; so this *Trimming* or *Picking*, is only to destroy, and entirely remove young *Branches* of the Year, either thick, or small, growing improperly, and capable of causing a Confusion, or prejudicing either the whole *Tree*, or only the *Branch* on which they are grown.

The Time of *Pruning*, as we have declar'd, is from *November*, to the End of *March*; which *Pruning* must be perform'd regularly every Year; whereas the Time of the *Trimming* is commonly about *May* and *June*, and sometimes *July* and *August*, and sometimes it is not done at all; but when there is Cause for it, it must not be neglected; and generally it cannot be done too soon, to prevent the Growth of those useless *Shoots*, and consequently, the wasting a great deal of *Sap* unprofitably, which might be employ'd to better Uses: So that when it has been neglected, or not perform'd soon enough, it must be done late, if possible, since it is better to do a necessary thing late than never.

It is not easie to set down precisely what *Branches* must be so *Prun'd*, or *Trim'd*, particularly to satisfy those, among the Curious, who know but little, and are only Beginners: But a skilful *Gard'ner*, who, by the Rules heretofore establish'd, has form'd to himself the Idea of a fine *Tree*, and consequently must know partly what *Branches* are requir'd, as well for the Beauty of the Figure, as for *Fruit*; such a *Gard'ner*, I say, must needs, at first sight, know those *Branches* that are no ways answerable to the Idea he has conceiv'd, and consequently take them away at their very Birth, or at least from the Moment he perceives them, especially before the End of Summer; that is, before the *Trees* have made an end of *shooting*, or that such *Branches* are grown thick; otherwise they must remain until the time of *Pruning*: But, generally speaking, I may say, that this *Trimming* or *Picking*

*Picking*, is to retrench or take off all ill-plac'd *Branches* shooting from any part whatever, whether good or bad: especially such as cause a Confusion, without being proper either for *Wood*, or *Fruit*. The Knowledge of the Order in which the *Branches* grow, whether good or ill, which we have clearly explain'd at the beginning of this Treatise, is absolutely necessary for this.

*Pear-Trees* must particularly be look'd to, from the very Beginning of *April*, to the End, that is, from a slanting *Cut*, which was to produce a *Branch* for *Wood* outwardly, there should grow a thick one inwardly, it may be taken away immediately, in Consideration of the two Reasons which ordain *Trimming*.

It is likewise necessary to take away the *Branches* which hinder others that are better plac'd, and should be more useful, from receiving a due Nourishment; For Example, Take away high *Branches*, to favour low ones; by which means they would grow considerable; whereas without such a help, they would remain unprofitable, and the *Tree* would suffer, both as to the Figure, and the *Fruit* we expect from it.

This *Trimming* or *Pruning*, is perform'd upon young *Trees*, as well as old ones; and therefore, when a young *Tree* at once shoots high and low *Branches*, with a great Interval or space between them, it is proper to take away the highest, when the lowest are design'd to be preserv'd; or else the lowest, when the others deserve it better: Which is not only to be done by way of *Trimming*, but also by the real way of *Pruning*, that is, with the *Pruning-Knife*, when the bare *Trimming* or *Nipping* is not sufficient.

If, upon any *Tree* whatever, one and the same *Eye* produces two or three *Branches*, some of them must be taken away by way of *Nipping off*, to better the Condition of the others, as well as to avoid Confusion.

So that upon a weak *Branch*, which, from one *Eye* or *Bud*, shoots, for instance, two or three, and all probably weak, I will only preserve one, chusing that which appears to be the best, that is, the thickest.

But if, on the contrary, a very vigorous *Branch* shoots three from one and the same *Eye*, and that the middlemost appears too strong, and the worst plac'd, I shall, without doubt, take it away, to strengthen the two others a little; which may afterwards, the one on one side, and the other on the other, prove very serviceable to the *Tree*.

So upon very vigorous *Trees*, it is necessary, at the *Nipping off* or *Trimming*, to take away some of the strongest *Branches*, always preserving such as are somewhat less, provided they seem to be good; and especially, when the thick *Branch* that has been *Prun'd* shoots many, whence Confusion proceeds, the highest must be taken away, taking Care however not to disburthen those kind of *Trees* too much, which, by reason of their great Vigour, hardly produce any other but thick *Branches*; whereas, on the contrary, upon *Trees* that have not much Vigour, all the slenderest and poorest must be taken off, in order to strengthen those that appear stronger, and yet are not so strong as they should be.

From thence it is easie to conclude, that some *Trees* may as well be prejudic'd by *Nipping off* of them too much, as others by not being *Nipp'd off* enough: The Gard'ner's Prudence must distinguish between those whose great Vigour requires one kind of *Nipping off*, or *Trimming*, and those whose Weakness requires another.

I will say by the by, that if it be judg'd that many *Cyons* may be requir'd to *Graff Scutcheon-wise*, it will be fit to be somewhat more cautious in the *Nipping off* of vigorous *Trees*, which may furnish *Graffs*; still taking Care that it may not prejudice the *Fruit* of the following Year.

It happens pretty often, that for want of having *Nipp'd off*, or *Pallisado'd* prudently, we see that, in the Confusion of *Branches*, some long slender ones shoot out; which must be carefully taken away at the Season of *Pruning*, or, at least, shorten'd to an *Eye* or *Bud*, being commonly naught.

It likewise commonly happens, that the *Branch* of a *Peach-Tree* shoots others in the very Summer, which has produc'd it, in which Case it must be examin'd, and (if very poor) *Nipp'd off*, or taken away, in any part whatever: But if of a good thickness, having double *Eyes*, or *Buds*, so as to be fit to make a *Fruit-Branch*, it must be carefully preserv'd, though only grown in *July*. And if the lower part of such a *Branch* should produce one of a reasonable thickness, so as to be proper for a *Branch* for *Wood*, it must be look'd upon as a very good Omen for the Beauty and Preservation of the *Tree*: But if, on the contrary, the upper part of such a *Branch* should shoot any which should grow so thick as to be only fit for a *Branch* for *Wood*, it must be taken away, as being in a place where we have no occasion for a *Branch* for *Wood*; besides, it would prejudice the Mother that produc'd it.

It is not much to be question'd, but that, as in *Pruning a Vine*, while in *Sap*, we visibly lose a great deal of *Sap* through the part so *Prun'd*, so in *Fruit-Trees*, some of the *Sap* evaporates,

evaporates, or is waisted through the place that is cut at the time of *Shooting*, which is in the Summer.

It is likewise observ'd in the *Pruning of Melons*, that a *Branch*, being *Prun'd*, produces more new ones than that which was left *Unprun'd*; and therefore I advise the *Pruning* of too vigorous *Trees* late: For it is observable in *Peach-Trees*, that a thick, young *Branch*, having been cut in the Summer-time, seldom shoots afterwards, or, at least, very considerably, inasmuch that the end of it blackens and dies; the Consequence of which is, that the neighbouring *Branches* thereby commonly grow the more vigorous. But, indeed, neither this *Nipping off*, nor the *Pinching*, or *Breaking*, do waste *Sap* at this rate; and are so far from being dangerous Operations to be perform'd in the Summer, as is the *Pruning* with a *Knife*, that they are very useful, and often very necessary.

Though this *Nipping off* properly relates only to the removing of *Buds*, it may likewise be understood for the *Plucking off* of *Fruit*, especially *Stone-Fruit*, when there is too much in one place; this *Plucking off* being perform'd at the same time with the *Nipping off*: Which Matter I treat of at large in another place, and so shall say no more of it here.

When any *Branch* (which seem'd to be good at the time of *Pruning* it, and therefore was preserv'd) grows poor, for want of a good Supply of new *Sap*, which happens sometimes by an inward Disorder, which could not be prevented; in such a Case, there is no other Remedy, than the taking away of such a *Branch*, as soon as perceiv'd. Sometimes also some useless *Branches* may have been left by Negligence, or want of Application; which must likewise be remov'd, as soon as observ'd: And supposing some fine *Fruit* may be left on the Extremity of a *Branch* that has produc'd no new *Wood*, which is not common, in that Case the *Branch* must not be taken off until the *Fruit* be gather'd; after which, it must be remov'd, since it could never be good for any thing.

## CHAP. XXXIV.

*Particular Remarks for another material Operation, to be perform'd in the Summer upon some Trees, which is called Pinching, or Breaking.*

*Pinching*, in relation to Gard'ning, is, to break designedly a tender *Sprig* of any *Plant* whatever, and that without the help of any Instrument, only using the Nails of two Fingers. This way of *Breaking* has ever been practis'd upon the *Shoots of Melons, Cucumbers, &c.* but I do not know that ever it was practis'd upon any *Fruit-Trees*; yet I have thought fit to make use of it, though only upon four kind of *Fruit-Trees*, viz. *Pear, Peach, Fig, and Orange-Trees*; and I shall only treat here of what relates to the thick new *Branches* of vigorous *Peach-Trees*, and the thick new *Branches* shooting from slit *Graffs* made upon old *Pear-Trees*, being still in a pretty good Case: I will treat in other places of what relates to the *Pinching* of *Orange* and *Fig-Trees*, and even of *Strawberry-Plants*, and *Raddishes* run up to *Seed, &c.*

The Reason which made me imagine this way of *Pinching* these two sorts of *Trees*, and that makes me use it pretty often, is, that it being most certain that *Fruit* seldom grows upon thick *Branches*, and commonly upon the weak ones, I thought, if it were possible to order Matters so, that the *Sap*, which is wholly employ'd in producing but one thick *Branch*, which proves either useless, or cumbersome; I say, if it could be order'd so, that this *Sap* might be so divided as to produce several *Branches*, there is no Question to be made, but in the Quantity there would be some weak ones, or perhaps many, which consequently would be proper to bear *Fruit* instead of that, and, as we have already said, the thick *Branch* would have produc'd no good Effect.

I have found the thing possible, and that it is requir'd, not only in *May*, but sometimes in *June* and *July*, to break the thick new *Shoots* of those kind of *Trees*, while yet tender, and as easie to break as *Glass*; which is most true.

This Operation is founded upon a Reason which I have explain'd in my Reflections, and therefore is not necessary here.

Having then, at the time heretofore mention'd, broken some of those thick new *Shoots* within two or three *Eyes*, or *Buds*, I have often obtain'd what I desir'd by it, that is, as many *Branches* as I had left *Eyes*; and, indeed, a vigorous *Tree* cannot have too many, provided

provided they be good, and well plac'd. Among the *Branches* proceeding from such *Pinching*, if I may use the Expression, commonly some have prov'd weak, and those have born *Fruit*; some have prov'd pretty strong, and have been *Branches* for *Wood*: If the *Sap*, which produc'd such thick *Branches*, and form'd them with a lively, vigorous Action, met in its way an Obstacle, to stop it short in the height of its Action, and consequently hindring it from following its Course in continuing to rise, as it would do, not being hinder'd; in such a Case, this *Sap*, which, in the mean time, cannot cease acting, being forc'd to get out one way or other, would burst out by as many Cranes, or Overtures, as it would find near that place where it was stop'd; or, upon necessity, would make some of it self.

But it must be noted, that this *Pinching* is seldom to be practis'd upon any but the thick *Branches* of the Top, which would remain useless by their Situation, and yet would consume abundance of good *Sap* superfluously; and therefore it ought to be very seldom us'd upon the thick *Branches* of the lower part, it being always very necessary to preserve them until the Winter-Pruning, in order to their shooting some others the following Year, fit to fill such places as naturally, and for the most part, are but too subject to be thin.

It is likewise to be observ'd, that this *Pinching*, or Breaking off, must never be perform'd upon weak *Branches*; which, having no more *Sap* than they want, to be good, would only produce slender, *Sapless* ones in that place, where the small Portion of *Sap* which Nature allows them should be divided.

And therefore nothing must be broken upon such *Trees* as produce but too many of those weak *Branches*, and few of those good thick ones: There are some of this Character to be found among all kind of *Peach-Trees*.

The best time for *Pinching*, particularly in cold Climes, like ours of *Paris*, and the Neighbourhood of it, as we have already said, is, at the End of *May*, and the Beginning of *June*; and when necessary to be perform'd a second time, the time of the *Solstice*, or longest Days of the Year, is admirable for it, as well as to *Water* some *Trees* in a dry Soil, when *Rain* is wanting; at which time there is a wonderful re-doubling of Action in the *Roots*, and consequently in the *Branches*; that being, indeed, the time of the greatest Effort of all the Spring.

We have already observ'd, that the first Fury of *Stone-Fruits* begins to appear at the Full-Moon of *April*, which commonly falls out in *May*; and we are going to see another kind of Fury at the First Quarter of the Moon of the said Month of *May*; both which times are good for *Pinching*: And, indeed, we observe, that all the *Branches* of every *Tree* do not begin to shoot vigorously at the same time; so that what has not been *Pinch'd* or broken off at the first Season, may be done at the second.

I have said, that the best time to *Pinch* the thick new *Branches* of *Peach-Trees*, was, at the time they are easie to break at the least pull, without being oblig'd to use a *Knife* to shorten them: From thence it is easie to judge, that I have found it dangerous to use Instruments to cut such *Branches*, which is true; for, as I have said heretofore, the Extremity or End of such *Branches* so cut, is apt to blacken and die, it certainly not producing the same Effect with that which proceeds from the Action of *Pinching*. The same thing may be said of the thick, tender *Branches*, proceeding from the *Grafts* of *Pear-Trees*, made upon a thick, vigorous *Stock*; however, Experience teaches us, that the *Knife* is not so dangerous upon these, as upon those of *Peach-Trees*.

## CHAP. XXXV.

*Of what is to be done to some Trees, being extraordinarily vigorous, not Bearing of Fruit.*

There still remains to see what is to be done in relation to some *Trees* being extraordinary vigorous, to that degree, that they remain sometimes many Years, only producing much *Wood*, and little *Fruit*, and pretty often none at all, as most *Pear* and *Apple-Trees* are, being *Grafted* upon free *Stocks*; and particularly, how to preserve a *Tree* producing only small *Shoots*, and most of them of false *Wood*, or which yearly shews its Infirmary at the end of its *Branches*, and by the colour of its *Leaves*.

As to the very vigorous *Tree*, particularly in question here, many People propose, as sovereign and infallible, abundance of Expedients and Remedies, which I have tried a long while, with great Application; yet, upon my Word, without the least Success.

To

To bore a Hole through the *Stem* of a *Tree*, and put a Peg of dry Oak into it; to split one of the main *Roots*, and put a Stone into it; to *Prune* at the time of the Declinings of the Moon, &c. are wretched Secrets of good old People, infatuated with old Maxims; People who have but little Skill in Vegetation, and are easily satisfy'd.

For my part, besides my being persuaded by Experience, that my manner of *Pruning* often prevents the Difficulty now in question, I have moreover, in case of great Obtinacy, recourse to what I have said elsewhere, it being really the best thing that can be done; which is, that, as constantly the *Fruit* on *Trees*, is only an Effect, or, at least, a Mark of a certain moderate Weakness, it is necessary, without minding a thousand Trifles, to go to the Source of the Vigour of the *Tree*, that is, to the *Roots*, uncovering half of them, and cutting off one, two, or three of the thickest on that side, and consequently the most active; inasmuch that the least part of them may not remain, to be capable of acting, or producing the least Thread of a capilar *Root*: The *Roots* of the other Moity, (for I suppose there may be good ones; otherwise, to many must not be taken away from the Side uncovered;) the *Roots*, I say, of the other Moity, left untouched, will be sufficient to nourish the whole *Tree*.

This Remedy is infallible to prevent such *Trees* from being, as it were, resty to our Cares and Industry, and will soon make them produce *Fruit*; by reason that this will put a stop to the Production of the *Sap*, so that it shall not be so abounding as before, one, two, or three of the chief Workers being remov'd; and thus the weak *Branches* will only receive a moderate Nourishment, and the *Buds*, begun, instead of extending, will grow round, and consequently turn to *Fruit-Buds*, will *Blossom*, and finally yield what is desired of them.

Philosophers may Criticise upon, and explain this as they please; but still it is most certain, that the thing happens as I have said.

To *Root* up such *Trees*, and re-plant them immediately, with the main part of their *Roots* and *Branches*, either in the same place, or in another, as some Authors propose it, is sometimes an effectual Remedy; but it seems to me somewhat too violent, since sometimes it threatens Death, and often makes an ugly *Tree*, which, in my Opinion, is as great a Defect as the other; for which reason I use it but seldom, though sometimes I do.

## CHAP. XXXVI.

*Of the Conduct, or Culture of Fig-Trees.*

After having said in another place, and that after a long Experience, that a ripe *Fig*, according to my Pallat, is the best of all the *Fruits* growing upon *Trees*, that hitherto I have met with; and, indeed, is look'd upon as being the most delicious, by all judicious Persons; I thought my self oblig'd, in this general Treatise of the Culture of *Fruits*, to make a particular one for the Conduct of this.

Before I enter upon this matter, I cannot forbear expressing my Astonishment, considering that notwithstanding the singular Esteem most People have for good *Figs*, it was a general Custom in this Country to have but a very small quantity of them in each Garden, not exceeding two or three at most, and even those commonly abandon'd in some inner Yard, expos'd to all manner of ill Treatment, without the least Culture. Indeed, in warmer Climates they are better, and more honourably treated; there are always abundance of them, not only in Gardens, and under the shelter of a House, but particularly in Vineyards, in Hedges, and in the open Fields; and they make a considerable Trade of those that are preserv'd, and dry'd, which I do not mention here.

I am sensible, that the difficulty of preserving *Fig-Trees* from the great Colds of the Winter, is the chief Reason for which we have so few of them in our Climates; but yet, considering the Consequence and Merit of their *Fruit*, in my Opinion, People should have made it their Study, a little more than they have done, to enjoy, to a higher degree, that rich Present of Nature.

It is not necessary to repeat here what I have said at large in the Treatise of the Choice and Proportion of *Fruits*, touching the Diversity of the Kinds of *Figs*, not of my preferring the white ones, whether long, or round, for this Country, to all the others: Neither will I repeat what I have said, as to the Situation which is most proper for them.

I shall only relate the manner of my Cultivating of them; and especially, how that, notwithstanding the ill Custom, which made us be satisfy'd with a few of them, I have apply'd

apply'd my self to the breeding of many; and that not only by the common Way of *Planting* them in *Espaliers*, or against Walls, but also in an extraordinary manner, that is, in *Cases*, which is both pretty new, pleasant and useful; which, if I may be allow'd to introduce a new Expression, may be call'd a *Figuerie*, in imitation of *Orangeries*.

The Delight His Majesty takes in that *Fruit*, and the danger of Dying, to which all *Fig-Trees* are expos'd in the open *Ground*, in great Frosts, or, at least, of bearing no *Fruit* that Year, have been two powerful Motives for me, who am honour'd with the Place of Director of all the *Fruit* and *Kitchen-Gardens* belonging to the Royal Family, to induce me to bethink my self of the Means of Certainly having a great many *Figs* every Year.

In the performance of which, I have met with very little difficulty; for, in the first place, the common Mould of every *Garden*, mix'd with an equal quantity of *Soil* or small *Dung*, turn'd to Mould, is extraordinary good for it. Secondly, The *Roots* of *Fig-Trees*, instead of being hard and thick, like those of other *Fruit-Trees*, either *Stone*, or *Kernel*, on the contrary, remain soft and flexible, and commonly slender, and so are easily order'd in *Cases*, and even with more ease than those of *Orange-Trees*, which thrive so well in them. Thirdly, These kind of *Trees* naturally produce abundance of *Roots*; so that it is very easy for them to live fatly and vigorously in a small quantity or space of *Ground*, provided Moisture be not wanting. Besides, the universal Approbation I have met with in this Undertaking, and the Imitation that has follow'd it by many of the Curious, have encourag'd me to make a considerable progress in this *Figuerie*, or *Fig-Garden*; and that which has most induc'd me to proceed in it, is, that the *Fruit* ripens a great deal sooner here than in the main *Ground*, and is somewhat better, and yellower, the *Earth* which is easily heated in the *Cases*, producing the first good Effect, and the open Air the two others.

To which I might add, the pleasure of seeing in this Country abundance of *Fig-Trees* in the open Air, (which seem'd to be altogether reserv'd for hot Countries,) and that of being, in the Summer, in the middle of a *Wood*, abounding with *Figs*; there to chuse and gather the finest and ripest, without any trouble.

Therefore I have bred abundance of *Fig-Trees* in *Cases*, having found that, besides the Advantages above related, there was yet another which is very considerable; and that is, that, to preserve them securely, and with Ease, in the Winter, an ordinary Covering to keep off the great Frost is sufficient, that Covering or Shelter not being near so considerable as those for *Orange-Trees* and *Jessamins*, these both stripping or casting their *Leaves* at the least Cold, by which they are almost utterly spoil'd; every body knowing, that a Fall of *Leaves*, proceeding from the Rigour of Cold, or too much Moisture, denotes, in those *Trees*, at least, a great Infirmary in the *Branches* so stripp'd, inasmuch that it is almost impossible to recover them; whereas we have no *Leaves* to preserve on our *Fig-Trees*, it is only *Wood*, I mean *Branches*, of which the *Wood* is pretty court, though extremely *Pithy*, or *Sappy*; inasmuch, that it resists the Cold much better than *Orange-Trees*, it being certain that this *Wood*, which of it self is pretty tender, notwithstanding, dries up at the usual Fall of the *Leaves*, and consequently grows hard; the reason of which is, that the *Roots* of *Fig-Trees* ceasing to act within, from the time the *Leaves* begin to fall on the outside, the *Wood* no longer receiving any new *Sap*, ceases to fear the Rigour of the Season; whereas the *Wood* of the *Orange-Trees* and *Jessamins*, by the perpetual Operation of their *Roots*, remains as tender in the Winter as it is all the rest of the Year: Which is the reason that, as the *Sap* continually rises, particularly for the Nourishment of those *Leaves* that remain upon the *Branches*, as well as for the Nourishment of the *Branches* themselves; that *Sap*, at that time, as it were, keeps both the one and the other so sensible to Frost and Moisture, that thereby they often fall into those great Disorders, known by every body, which are almost the greatest they are liable to.

It being then granted, that, for the preservation of our *Fig-Trees*, it is sufficient that the great Frost should not light directly upon their *Branches*, it follows from thence, that it is sufficient for the *Conservatory* to be reasonably close, as well at the top, as at the Doors and Windows; inasmuch that the *Ground* may have been pretty well frozen in the *Cases*, and yet the *Fig-Tree* receive no prejudice by it: So that a moderate low Cellar, or a Stable, or a Common-Hall, which would be so pernicious to *Orange-Trees* and *Jessamins*, may not be amiss for our *Fig-Trees*; not but if that place were very moist, it might harm them: As also a *Cold Fig-Tree*, remaining in the Winter without a Covering, would be much more endanger'd than another in the main *Ground*; for a thick Frost would kill the *Roots*, as well as the Head; whereas a *Fig-Tree*, planted in open *Ground*, would, at least, be preserv'd towards the *Roots*.

The Time of putting *Fig-Trees* in the *Conservatories*, is the Month of November; that is, they must be plac'd there as soon as the thick or great Frosts are coming on, there to remain

without wanting the least Culture, or any Care, besides the keeping of the place as close as can be, and that only during the great Colds; for, excepting that time, they need not be kept so close.

Lastly, They may be taken out again about the middle of March, and sometimes at the very beginning, the Weather being very fair, and the Seasons of great Frosts appearing, in some manner, past: There is no need of staying, till there is nothing at all to fear, for the new *Figs*; for then there would be a necessity of staying until the end of April; it happening pretty often, that, until that time, there are certain Frosts, which blacken and kill them, though reasonably thick. The reason which obliges to take them out sooner, is, that it is necessary *Fig-Trees* should immediately enjoy the Rays of the Sun, and some soft Showers of March and April, in order to be able to shoot their first *Fruit* with success, to the end, above all things, that those *Fruits* may infensibly be us'd to the open Air; which must make them grow, and ripen betimes; it being most certain, that the *Figs* which grow under Covert, coming into the open Air, are apt to blacken, and so perish, even without any Frost, or considerable Cold; a North-East Wind, or excessive Heat, in the first Days of their coming out, destroying them without Redemption: Whereas those *Figs* that have been a little enur'd to the Air, have harden'd themselves so, as to be able to resist, notwithstanding the Intemperature of the Season.

In taking the *Fig-Trees* out of the *Conservatory*, at the time prefix'd, there are only two things to be done: The first is, to put them immediately along, and as close as can be to some good Walls, expos'd to the South or East; and there leave them, until the Full-Moon of April be past, which is about the beginning of May. This situation is very necessary for them, to enjoy the Aspect of the Father of Vegetation, and be soak'd by the Rains of the Spring, as well as to find some Shelter against the Morning-Frosts of the Remains of Winter, which are those of March and April; because that, whereas this wonderful *Fruit* shoots out at that time, ready form'd, from the Body of the *Branch*; presenting it self thus, all on the sudden, without the help of any Covering, or being accompany'd with Blossoms, or Leaves, it must needs be very tender in the first Days of its Birth; and therefore such Frosts, which are very common and frequent at those times, falling then upon them, would prove very dangerous, or rather mortal; inasmuch that, though this Shelter be favourable to *Fig-Trees*, both to such that are planted in the *Ground*, as well as to those that are in *Cases*, yet, notwithstanding, it is necessary to cover them with Sheets, or Straw, or long dry Dung, or Pear-Cods, when-ever they seem to be threaten'd by some Frost: The cold North-West Winds, North, and North-East, or some Hail, or melted Snow, seldom fail to occasion it in the Night, after having commonly fore-told it the Day before: Woe to the Gard'ner who neglects, or does not improve the Signal of such an ill Omen.

The second thing that is to be done, after having remov'd *Fig-Trees* out of the *Conservatory*, and having thus plac'd them under shelter, is, (to use the Phrase of Gard'ners) to give them a good Wetting in every *Case*; which is, one good substantial Watering; inasmuch that all the Moat may be soak'd by it; and there shall hardly need any more Watering, until, with some Leaves, the *Fruit* begins to appear all together, and even a little thick, which is about the middle of April; the Spring-Rains will supply other Waterings, but this first Watering is absolutely necessary, to soak the *Ground* anew, which, after four or five Months Confinement, was grown quite dry; otherwise the *Roots*, at the coming in of the hot Weather, should not be capable, for want of Moisture, to renew their Action; and consequently, there should be no good Motion of Vegetation, either to nourish and thicken that new *Fruit* the sooner, or to afford us the sooner Leaves, and new *Wood*; with a Certainty, that the sooner *Fig-Trees* shoot in the Spring, the sooner we shall have the second *Figs* of Autumn. I will take notice by the by here, that the first *Figs* grow independently from the Action of the *Roots*, just as the Blossoms of other *Fruit-Trees* open; and produce their first Buds independently, from the Action of their *Roots*.

Lastly, The Cold, that is the great Enemy of those *Figs*, being gone, which happens commonly about the middle of May, the *Cases* must be remov'd from that Shelter, and put somewhat at large, to be in the open Air, especially in some little *Garden*, well surrounded with good Walls; they may be dispos'd so, as to border, or form Allies on both sides, or else a little green *Wood*, as I do, when there are enough for it; which is that I call, and ought to be call'd, a *Figuerie*, or *Fig-Garden*.

As soon as these *Cases* are thus dispos'd of, they must be allow'd another good Watering, the same to be continu'd once a Week, until the end of May; after which, they must be Water'd, at least, twice a Week; and lastly, towards the middle of June, they must receive great and frequent Waterings, almost once a Day.

But, before I come to this, in order to gain Time, and to get with ease a great many *Fig-Trees*, for the Establishment and Maintenance of my *Fig-Garden*, I begin by making, towards the middle of *March*, an ordinary *Bed*, or *Colech*, of good *Dung*, of about three Foot high, in proportion to four or five Foot in Breadth, and as much in Length as my Occasion requires: I let the great Heat of it pass, which commonly lasts five or six Days; after which, having provided *Earthen Pots* about five or six Inches Diameter, or small *Cases* about seven or eight: I fill those *Pots*, or *Cases*, with the *Mould* of the *Garden*, mix'd, as I have said, with an equal quantity of *Soil* or small, old, consummated *Dung*, or with nothing else; that *Soil* being very good for the first Multiplication of *Roots*, but would not be so good for the other *Casings*. Care must be taken to press that *Earth* very close into the bottom of the *Pot*, as well as in the bottom of the *Case*; it will suffice to have two or three Inches loose on the top.

After this, I take small *Fig-Trees*, altogether *Rooted*, and after having extremely shorten'd all their *Roots*, I put them, about three or four Inches deep, into the said *Pots*, or *Cases*, allowing each but about four or five Inches *Stem*: (*Fig-Trees* in *Cases* cannot be too short body'd.) Afterwards I put the said *Pots*, or *Cases*, up to the Middle in the aforesaid *Bed*. A considerable part of those *Fig-Trees*, so Planted, commonly take, and produce, that very Year, some pretty fine *Shoots*, and in a pretty good number; provided, as is absolutely necessary, they be well *Water'd* during the Summer, and that the *Bed* has been heated twice or thrice on the sides, to keep it always reasonably hot.

When I make use of *Pots*, I take out of the *Pots*, that very Summer, or, at least, in Autumn, or the following Spring, those little *Fig-Trees* that have shot well in those *Pots*, to put them together, with the *Mote* into *Cases*, of about seven or eight Inches, fill'd up with the prepar'd *Earth*; which, above all, as I have already said, must have been press'd close into the bottom, to hinder that *Mote*, and the new *Roots* that shall grow, from descending too soon, and too easily, into that Bottom; and to do it yet more effectually, in *Casings* of them, I observe the same Method as in *Casings* of *Orange-Trees*, excepting only *Rubbish*, and pieces of old and dry *Plaster*, which are no wise necessary here; that is, I Plant these *Fig-Trees* in such a manner, that the Superficies of the *Mote*, may exceed the Edge of the *Case* about two or three Inches; and, with *Dowries* put on the sides, I keep in the *Earth*, and the *Water* of the *Waterings*, so that none of it can be wasted; the weight of the *Cases*, and especially the frequent *Waterings*, together with the moving or transporting of the *Fig-Trees* to *Cases* sinking the Surface but too soon.

Great Care being taken to *Water* those young *Fig-Trees*, in those little *Cases*, they begin pretty often to produce *Fruit* in them the very Year of their being *Cas'd*; at least, they are in a Condition to produce some the following Years. They must be kept two Years in those kind of little *Cases*, in order to be put next into larger, of about thirteen or fourteen Inches in the inside; in order to which, two thirds of the *Mote*, must of necessity be taken away, *Planting* them especially, as I have already said, a little high, and pressing the *Ground*, as close as can be, into the Bottom: Which things must all be done of necessity, at every Removal out of the *Cases*.

They are to remain in these, until there be a necessity of changing them a-new: which must be done as soon as the *Fig-Trees* are observ'd to shoot no more thick *Wood*, which commonly happens at the end of the third or fourth Year after their being *Cas'd*: At which time they must be taken out of those *Chests*, and, after having perform'd the Operations heretofore explain'd, put again either into the same *Cases*, if, after having serv'd three or four Years, they are still good enough; which happens but seldom, the great *Waterings* rotting many of them; or into other new *Cases* of the same Size.

Those *Fig-Trees* must be left three or four Years longer in those kind of *Cases*, being about thirteen or fourteen Inches in the inside; and afterwards, as soon as it is observable, by the Marks above explain'd, that there is a necessity of changing them, the same Method as before must be us'd, to put them into other *Cases* of seventeen or eighteen Inches; in which they must likewise be preserv'd for the space of three or four Years; at the end of which, they must be remov'd again, for the fourth time, in the manner aforesaid, either into the same *Cases*, or into others of the same Size.

The difficulty of Transportation commonly hinders me, after the wearing out of these second *Cases* of eighteen Inches, from venturing to put them into larger; which, notwithstanding, would be very proper for them, being about twenty one or twenty two Inches, which, however, should be the last I would remove them into, unless I had very great Conveniencies, both for the Transporting of them, and for the Laying of them up.

And

And whereas, at length, those *Cas'd Fig-Trees* would grow to such a degree of largeness and weight, as would require too many Machines to move them, and even too great a quantity of *Water* to give them due *Waterings*, I abandon them, after having cultivated them for the space of fifteen or twenty Years; and take no farther Care of them, than to Plant them, either into our own *Gardens*, or in some of our Friends; for which they are yet good enough, provided Care be taken to cut off a considerable part of their *Wood*, and especially the main part of their *Roots*; or else, with a great deal of Regret, I resolve to burn them. But, in the mean time, in order to have my *Conservatory*, and my *Fig-Garden*, always equally fill'd, I yearly rear up new ones, in the manner aforesaid; which serve to fill up the room of the old ones I have been oblig'd to part with.

The best of it is, that the Breeding of them is easy: First, Because the Feet of the *Fig-Trees* that are Planted in the main *Ground* shoot abundance of Rooted Suckers. Secondly, Because it is very easy to lay Branches into the *Ground*, round about every old Foot, in order to their taking Root. And Finally, because some may be bred by means of bended Layers, plac'd a little in the Shade, it is good to make a little Gash in those towards the Extremity, though many succeed without it.

Thus there are abundance of Means, and all very easy, in order to make a pretty good Provision of small young *Fig-Trees*: Wo to that Gard'ner who does not do it, and does not use his utmost Skill to multiply so good a Tree; trying immediately, whenever he is oblig'd to cut some *Fig-Branched*, to make those Layers take Root; at he may do, provided it has a little *Wood* of two Years standing; because that those cut Branches that are but of a Years standing, are much apter to rot, than to take Root.

The greatest Inconveniency attending *Cases*, is that which I have mention'd heretofore; which is, that, during the Months of *June*, *July*, *August*, and *September*, there is an indispensable necessity of *Watering* them largely every Day, inasmuch that the *Water* may penetrate through the bottom of the *Case*; at least, without fail, they must be *Water'd* so every other Day, unless it *Rains* very hard; nor that the *Water* of *Rains* often penetrates the Body of the *Mote*; but, because while it *Rains*, there is no *Sun-shine* capable of penetrating through the *Case*, to dry up the *Roots*; which is the only Reason that may stop the Continuation of *Watering*.

Neither must small *Rains* be minded, they are of no use to *Fig-Trees*; on the contrary, often prejudice them, by persuading the Gard'ner they are sufficient to supply the want of *Watering*, which they are not; the broad Leaves of *Fig-Trees* hindering the *Earth* (which lies very close in the *Case*, and is very hard by an Infinity of *Roots*) from being soak'd by an inconsiderable *Rain*, since even great Showers cannot do it.

It is most certain that the *Fruit* is in danger of dropping down, and perishing, the *Roots* of *Fig-Trees* ceasing never so little to act, for want of Moisture, and to furnish the *Figs* with the perpetual help they stand indispensably in need of; which will certainly happen, upon failure of the great and frequent *Waterings* werecommend: For those *Figs* that have wanted the least Nourishment, remain stobby, and, as it were, full of Wind, instead of being fill'd up with a good pithy Pulp; and so, instead of Ripening, drop down; which is the greatest Inconvenience that can be fear'd; and consequently, this requires so great an Application, that it is no easy matter to succeed in *Fig-Gardens*.

The *Fig-Trees* Planted in the main *Ground* requires no such Slavery; since such as are Planted even in very dry Soils commonly produce Fine Large Good *Figs*; the *Roots* which have the liberty of extending round about, tho' the *Earth* be never so parch'd, still find wherewithal to perform their Function and Duty: and in imitation of those, when the bottoms of *Cases* touch the *Ground*, commonly some *Roots* get out of it, which take into that very *Ground*, and there multiply to that degree, that they are able to live without frequent *Waterings*: But then they are liable to other Inconveniencies, which I shall mention in the Sequel.

There now remains to speak of the Pruning and Pinching or Breaking, which I Practice upon *Fig-Trees*, either Planted in the main *Ground*, or in *Cases*; both for the Forming of Fine *Trees*, according to the Beauty proper to those *Trees*, as well as to make them shoot the *Figs* the sooner, every one in their Season; that is, not only the first, which are call'd Blossom-*Figs*, but also the second, call'd Autumn, or Second-*Figs*, and *Figs* of the second Sap, &c.

As to the Beauty proper to *Fig-Trees* in *Cases*, it is not to be expected that it can be so regular as that of *Orange-Trees*, that are likewise in *Cases*; neither can the Beauty of *Fig-Trees*, either Dwarf-Standards, or against a Wall, be expected to perfect as that of Dwarf-Pear-Trees, or other Wall-Fruits.

We have sufficiently explain'd those kind of Beauties, each in particular, in Treatises written upon that Subject, without repeating it here: It will suffice to say, That the Beauty

Beauty of *Fig-Trees* in Cafes, confists chiefly in being real *Dwarf-Standards*, without having any *Stem* if possible; and lastly, in not Shooting too high, or being too much Extended, and open, with great bare *Branches*, which is but too common in those *Trees*, unless an extraordinary Care be taken of them.

There is no great necessity of faying, that at the end of Winter, or at the beginning of the Spring, it will be necessary to *Trim* or *Pluck off* all the Dead Wood of *Fig-Trees*, either in the main ground, or in Cafes, no body being ignorant of it: Those kind of *Trees* having very *Pithy* or *Sappy Branches*, are liable to have a great many of them spoild, tho' the Cold be never so moderate. We have often Experienc'd it, particularly in the Winter of 1675, in which there was not half an inch of Ice in any part, and yet a considerable number of *Fig-Tree Branches* perish'd; as if the absence of heat alone was capable to destroy them; consequently, a far greater quantity mult perish in long hard Winters, as we had in 1670, and 1676. in which, the Frost was so terrible, and our *Gard'ners* suffer'd so much by it, that they were forc'd almost in all parts, to cut the thickest *Fig-Trees*, within the very *Foot*, altho' they had been pretty well cover'd either with Straw, or dry Dung; even in so much, that the very Snow, which is a Sovereign Remedy for the Preservation of many young Tender *Plants*, as *Paeje*, *Strawberries*, and *Lettuce*, &c. could not avail for the preservation of those Well-below'd unfortunate *Fig-Trees*; nay, rather Contributed to their destruction.

It is true, that some *Gard'ners*, tho' pretty Careful, have (notwithstanding their Care) had the Ill luck to see part of their *Fig-Trees* Perish, when no body could impute the least fault to them, which was occasion'd by the Walls where those *Fig-Trees* were Planted, not being thick enough to hinder the rigour of the Frost from penetrating through them; happy are those whole *Fig-Trees* are Planted against good Buildings, particularly, near Chimneys, that are actually us'd, or at least, against Walls about two foot thick, and well expos'd: Happy likewise are those who have them in dry Elevated Situations, and yet in a good Ground.

And Consequently, unhappy all those, who having none of these advantages, are expos'd to all that's pernicious for *Fig-Trees*, as thin Walls to their *Gardens*, a Cold and Moist Soil, wanting both a favourable Climate, and Situation.

Since then *Fig-Trees* are as difficult in the preservation, as their *Fruit* is Precious; let us give an exact Summary of what we think most proper, at least to endeavour the defending of them as much as can be possible, from what is capable of destroying of them.

The Inconveniencies wherewith they are threaten'd, do not hinder me, as I have already declar'd, in the *Treatise* of the Choice and Proportion of *Fruit*, from advising every body to Plant a reasonable quantity of them; I mean in the main Ground, having somewhat of the Situation that is proper for them, tho' wanting some of the Conditions that were to be wish'd for, for them.

Great Winters do not happen so often, as to discourage us for ever from having some of those kind of *Trees*, which produce such an Excellent *Fruit*.

The most material thing in this Case for the Culture, is first, during the Summer, and Autumn, to give their *Branches* some liberty, the *Fruits* growing better, and more easily upon them: They must neither be Constrain'd, nor Palliash'd, or tack'd like the *Branches* of ocher *Wall-Fruit-Trees*; it will suffice to uphold them before with some *Pearches* barely plac'd upon great Hooks driven into the Walls, so as to be at three foot distance from each other; and that beginning from the bottom, there may be a Row within a foot of the Ground, Checker-wise: Those Hooks must be four Inches into the Wall, and about eight on the outside, made, as it appears in the Figure.



In the second Place, every Year, as soon as the *Leaves* of *Fig-Trees* are fallen, that is, as soon as the Winter draws nigh, whatever that Winter may prove; for we must always be as its being Violent, which dread ought to produce good effects in us; every year, I say, we must as much as can be constrain the *Branches* of those *Fig-Trees*, as near as we can to the Walls, either with Nails and Lint, or else with Oliers, Poles, and *Pearches*; but yet so, that they may neither break, nor crack; after which, must be apply'd to them a frame made of straw, about two or three Inches in thickness, or else bare Straw in the way of those frames, or rather Long Dung, about the thickness of four or five Inches; all this being well prop'd with *Pearches*, most broadwise, and some crosswise, taking care that

no part may remain bare, and expos'd to the weather. Besides all which, another parcel of the same long Dung must be kept ready near the *Fig-Trees*, to double the Coverings if need be, one single Night being sufficient to ruine all. North East Winds, as we had them in the Winter 1676. and the South Winds, like unto those of the Winter 1670. are likewise sometimes Mortal for *Fig-Trees*, and commonly more than full North, so that a guard mult be kept equally against them all.

Whenever then any body designs to have *Fig-Trees*, they must be prepar'd to take all the Care we have mention'd, as necessary for their Preservation: But when, notwithstanding all this, some prove so unfortunate as not to succeed, which without doubt will happen but seldom, provided the Walls they stand against, are condition'd as aforesaid: Although I say, this should happen, in my Opinion it ought not to trouble one, since nothing has been wanting that lay in the Power of Man.

The Winter being past, and even the Month of *March* almost quite spent, if the *Fig-Trees* stand against the Wall, only half their Covering must be taken away, especially that part the Winter may have spoild or rotten, and leave the *Branches* still fix'd thus to the Wall, at least always half cover'd, without altering any thing about them, until the Full Moon of *April*; provided always, that if the Full Moon of *March*, which happens in the Passion-Week, seems to threaten some Frost, as it often does, you must not fail at the least signal of it to redouble the Coverings immediately, there to leave them until the Weather appear more certain, and the *Figs* are grown to the bigness of a Large *Pea*; which in our Climates seldom happens until the beginning of *May*; for as we have already said, the main part of the great Colds seldom leave us 'till then: At which time it will be proper to put some small *Branches*, heretofore ty'd and constrain'd, at liberty; but yet, as I have likewise said, not without propping them with *Pearches* crosswise, to hinder them from falling too much forward: This, in my Opinion, is a sufficient stay, those *Pearches* put upon Hooks supporting the *Branches* very well, and hindering them, not only from falling, but also from breaking, and being ruffled by the Wind, and the *Fruit* is thereby preserv'd sound and intire.

I must farther add, that Large Sheets are proper enough to cover (during dangerous or suspected Nights) *Fig-Trees* being near the Wall, either Planted there, or in Cafes; to which end they must be fasten'd to the *Pearches*, like Sails to Masts, and besides, put other long *Pearches* almost straight over the *Fig-Trees*, to hinder the Sheets being agitated by the Winds, from touching the *Fruit*, the rubbing of the Sheets against them never failing to spoyl them; so that it will likewise be convenient to tie those Sheets near the Ground, by means of some Hooks that may hinder them from such Agitations.

The third Material thing to be done for the Culture of those *Fig-Trees*, is early to remove at the end of Winter, or even at the end of Autumn, the greatest part of the *Suckers* or *Layers* they shoot from their *Foot*, without preserving any, unless it be some that may appear to be of use, either to fill up the sides, or to supply the room of such as are dead, or dying: Besides, a good use will be made of those *Suckers*, or *Layers*, Planting them in some Trench made on purpose for it near some good Wall; and whether there, or elsewhere, Care must be taken to cover them so well, that the great Cold may not be able to spoil them.

It is not less necessary to hinder as much as can be, those *Fig-Trees* from raising soon to a great height, for Example, to two or three fathom, to the end, that keeping them always of a moderate height, they may consequently always remain full, and well furnish'd, especially, easie to cover in the Winter time, which cannot be when they are too high: Therefore from year to year the thick new *Branches* must seldom be allow'd more than a Foot, a Foot and a half, or two Foot at most, which is the only *Pruning* they require, after having, as we have already said, clear'd them from all manner of dead Wood.

Moreover, towards the end of *March*, it is fit to break the end of the Extremity of every thick *Branch*, which may chance not to be above a Foot in length, provided the Winter has not already spoild it, which happens commonly to such as have only been finish'd a great way in Autumn, but seldom happens to such as have been perfected betimes; however, that end which appears black, wrinkled, and dead, must be cut neatly.

This Method of *Pinching* or *Pruning*, serves to make several New *Branches* grow forked, instead of shooting single, which in regularity would have grown straight, that end being indeed a real beginning of a *Branch*: This breaking then promises a greater quantity of *Figs*, either for the second, which is most common, or for the first of the Summer for the following year; it being certain, that from the Navel of every *Leaf* a *Fig* will infallibly grow, and sometimes two at once, for one of those two Seasons.

This *Breaking*, or small *Pruning* of the *Bud*, which appears on the Extremity, serves besides, as it seems, to make the *Figs* shoot out the sooner, and consequently to Ripen them sooner,

sooner, since the first that come out of the Tree are always the first Ripe upon that Tree; It serves likewise, without doubt, to make them grow the larger, by reason that the Sap being thus hinder'd from rising as quick as it would have done without this Pruning, slips, as it were, into the adjacent Parts, and consequently into the Figs, and so serves to nourish them better than they should have been.

The same Operation which we perform in *Breaking or Cutting* in the Months of *March*, and *April*, the ends of the *Shoots* of the preceding year, which is to be understood of those that are thick, and moderately long; for the slender ones must be almost taken away quite, and as for those that are very thick, and very long, we have heretofore declar'd how they must be shorten'd: The same Operation must be perform'd at the beginning of *June*, upon the thick *Branches* that are in the Spring, and that likewise in Order to multiply that very Summer the *Branches* that are to grow, and consequently to multiply the first *Figs* of the following year; for many *Figs* must not be expected in either Season, unless by means of *Pinching* a great many good new *Branches* be prepar'd, which happens infallibly, when People are careful of *Pinching*; besides, this very Operation produces yet a wonderful effect, which is to hinder the Tree from mounting too much, and too soon, and from having *Branches* that may prove too thick, and too long, as well as bare, which is much to be fear'd.

If the preceding year some thick *Branches* have been allow'd a pretty length, which in their time have been good and useful, and yet give cause to fear the inconvenience of Thinness, or Barrenness, they must in the Months of *April*, and *May*, especially having no Fruit upon them, be shorten'd very low, close to the old Wood, in hopes that new *Branches* may proceed from that Pruning; but that is no more infallible here, than upon the old *Branches* of shorten'd *Peach-Trees*: However, it will serve at least not to leave any thing with too much length, which might cause an Emptiness, or Barrenness; and in the mean time the Sap will perform its effect upon some of the adjacent *Branches*, and sometimes also upon the old one that has been shorten'd; but yet it is certain that *Fig-Trees* never shoot so well, as from the Natural Extremity, I mean the Extremity of the *Branches* of the preceding years growth, not having been Cut.

*Fig-Trees*, in relation to their Fruit, are contrary to all other Fruit-Trees, because that the thick *Branches* of *Fig-Trees*, provided they be not of false Wood, they being liable to it, as well as other Trees, produce the Fruit; whereas the slender ones produce it in other Fruit-Trees; therefore as much Care must be had in destroying the slender *Branches* upon these Trees, as in preserving them upon others.

Those *Branches* of false Wood, or *Suckers*, are known here by flat Eyes, or Buds, and their being at a great distance from each other, in the same manner as upon Stone and Kernel Fruit; which *Branches* must of necessity be Prun'd somewhat short, which needs not be done to such which being happily grown on the Extremities of other *Branches*, are both very good, and of a moderate length, and as such have thick or large close Eyes, or Buds.

It is likewise particularly to be Noted, That in the Pruning of the thick *Branches* here is a greater Conflict to undergo, than in other Trees; since, as we have already often said, the thick *Branches* never produce or bear Fruit upon those, and only serve for the Figure: Whereas in *Fig-Trees* the thick *Branches* serve both for the Figure, and for the Bearing of Fruit; so that particularly, as to the *Fig-Trees* in Cafes, whereof the Chief Beauty consists in remaining low; it seems almost impossible to have them at once well form'd, to be of an agreeable Figure, and yet full of Fruit, which, notwithstanding, is the main Point here; for as the *Fig-Trees* in Cafes naturally produce but little Wood, and that whatever *Fig-Tree* has but little Wood, can have but little Fruit. In short'ning the thick *Branches* in prospect of the Figure, we decline the Fruit. The only Medium to be observ'd in this, is always to shorten some of the thickest in every Tree, either old, or new, which will serve for the Beauty of the Figure; at the same time venturing to leave all the other long, to enjoy the Fruit that appears upon them: In case any Misfortune be befall'n the first *Figs*, and that towards the middle of *April*, or the beginning of *May*, any be desirous to shorten also some of those *Branches* that had been left long for Fruit, it may be done, and in so doing, the number of the second *Figs* will receive so much diminution; but then, to make amends, the number of the first for the next year will be augmented, by reason that the new *Branches* that shall shoot from those that shall have been Prun'd, will not come out soon enough to produce Autumn *Figs*, but yet time enough for the others.

In hot Soils, all the *Figs* come out before the end of *March*, and the Trees begin to make new *Shoots* before the end of *April*, and the first Fruit Ripens before the end of *June*, and in the beginning of *July*, and the second in the beginning of *September*: But in Cold Soils, like *Verfailles*, the *Figs* do not come out till about the end of *April*, or even towards the middle of *May*; and the *Shoots* do not begin to appear neither, until towards the middle

middle of *May*; and the *Shoots* do not begin to appear neither, until towards the middle of *May*; and consequently, the first Fruits do not ripen there, until the middle or end of *July*; and the second, towards the latter end of *September*.

From every Eye, or Bud, which, in *Fig-Trees*, remain, in the Spring, upon the thick *Branches* of the preceding Year, we may certainly expect a Fig, and sometimes two; but we must never have above one which may come to good, if the Season be favourable: And, moreover, every Eye may produce a Branch, which does not always happen, it depending from the thickness of the Mother-Branch, and the short Pruning that has been perform'd upon it. Besides, every good Branch commonly produces to the number of six or seven Figs; that is to say, that it may be grown longer, by six or seven Eyes, or Buds; either from the Month of *March*, to the middle of *June*; or from the middle of *June*, to the end of Autumn; it seldom produces any more. Besides, *Figs* never grow twice upon the same Eye, or Bud; that which has produc'd any in Autumn, whether they ripen, or no, producing no others the next Season.

More Preparations must be us'd to make the first Figs grow, than the second; there being constantly but too many of these, because that found *Fig-Trees* commonly shoot many fine Sprigs, and that every Leaf form'd before Midsummer, generally owes a Fig, either for the Autumn of that very Year, which is most common; or for the Summer of the following Year, when the Fig has not appear'd in Autumn. This being so, it happens almost always, that abundance of those Figs for Autumn do appear, which grow in vain, by reason that they seldom ripen; the cold Rains, that are frequent and common in Autumn, and the white Frosts of the Season, killing them almost all, either in making them burst, and open, and so fall, or drop; or else, hindring them from growing to Maturity: And, as for these, it is not to be expected, that, notwithstanding they have been preserv'd Green in the Winter, and well fix'd to the Tree, the Renewing of the Sap in the Spring should bring them to any Perfection; it being most certain, that they will drop, without coming to any thing.

But as for those Figs we call Figs of the first Sap, or Midsummer-Figs, as they only grow in proportion to the Shoots and Leaves, shot from Midsummer, till towards Autumn; and that often *Fig-Trees*, particularly in Cafes, produce but few Branches, and regularly short, having but little Vigour in the Summer, and yet being oblig'd to nourish their Fruit, it follows consequently, that they produce but a small quantity of Fruit for the Spring, the weak Branches neither being capable to bear any at that time, nor when they do bear them, of preserving them against the Cold of the Season; wherefore it is fit to have very particular Regards, in order to make *Fig-Trees*, and particularly those that are in Cafes, produce fine Shoots after Midsummer, which depends upon the Vigour of the Foot; and more particularly on the Assistance we ought to afford it, when in that Condition.

When some Branches are preserv'd, being somewhat weak, they must be kept very short, to the end that the Remainder may be the better nourish'd, and that the Figs, if any can grow upon them, may grow the finer; but still, upon condition that if any other weak Branches should shoot from those, they shall all be taken away, and none preserv'd, unless perhaps the lowest, which thereby may grow to a reasonable thickness.

The same Care that is taken of *Fig-Trees* in Cafes, just after the Winter, placing them in good Situations, ought likewise to be taken to place them also in proper Situations at the Coming in of Autumn, to the end that, in order to the Maturity of the Figs of that Season, they may receive the Benefit of the little Heat the Sun affords us at that time. But then, none of the Roots must be allow'd to get out of the Cafes, by reason that there being a necessity of pulling them out, in transporting of the Cafes, both the Tree and Fruit would suffer considerably by it, which must needs create a Subject of Trouble.

But then, the only Remedy, when the bottom of the Cafes has touch'd the Ground in the Summer time, the Roots of the *Fig-Tree* having extremely multiply'd there, and the Tree being really the better for it, so as not to stand in need of such frequent Waterings, though, at the same time, it rots the Cafes the sooner; the bottom of the Cafes having thus touch'd the Ground, it will be necessary, before they are put in the Conservatory, to cut all those Roots well; or, at least, it must be done at the Taking them out again, before they are carry'd to the place where they are to remain all the Summer; for whatever part of them has been expos'd to the Air, absolutely spoils: But, after having taken off what is spoil'd, those very Cafes, being again put upon the Ground, the Roots will multiply again, more than the Year before. And it is not amiss to sacrifice thus some Cafes, especially such as begin to be old, and of which the *Fig-Trees* have been long Caid.

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Moreover, Whereas the first *Figs* may always ripen, whatever Situation they be in, the Heats of the Summer being sufficient for that, it induces me to place *Fig-Trees* willingly into the West Part, and pretty often likewise to the North; by which means I have *Figs* much longer, those that are plac'd in those indifferent Situations ripening after the others; so that they almost supply the Interval, between the First, and the Second: In which I advise others to imitate me; but yet, upon condition, not to expect Autumn-*Figs* from such Situations, unless the Season proves extraordinary fine and dry. And when *Fig-Trees* have been plac'd in such Expositions, or Situations, great Care must be taken to cover them yet better in the Winter, than those that were plac'd in the other Situations.

Particular Precautions must be had for *Fig-Trees* Planted in the Ground; especially, not to place them under the Spouts of great Coverings, which might threaten them with too much Water, and particularly, with a great deal of mizzling Frost, as well in the Winter, as in the Spring: And in case there be no other place proper to Plant them in, those Spouts must be turn'd some other way, by means of some Wooden or Leaden Gutter.

As to the Method of Pruning Dwarf-Standard *Fig-Trees*, there is nothing to be added to what we have already said of those that are Planted against Walls, or in Cases. The Dwarf-Standards will not produce *Figs*, altogether so soon as those *Fig-Trees* that are well Exposed, and even later than those that are in Cases: which being heated by the Sun, on all sides of the Case, ripen, as we have already said, a little sooner than the Dwarf-Standards, and even sooner than the *Espaliers*. Those Dwarf-*s* will likewise be a little troublesome for the Coverings of the Winter, and therefore it is dangerous to have any of those, unless it be in very little, private places, and those shelter'd from great Frosts: they will likewise be apt to cause a Confusion, if, being in a good Soil, Endeavours be us'd to keep them low, and to hinder them at the same time, from producing great Shoots: For which reason, it will be necessary to Pinch them carefully, and to have always some thick Branches, Prun'd low; and finally, to clear and free them often, as well from so many old worn out Branches, as from all new Suckers.

To that End, such Dwarf-Standards must always be kept at a very considerable distance from each other, in order to lay a great many Branches yearly into the Ground, thereby to ease the whole Body of the Tree, suffering it to grow in breadth as much as it pleases. As to their Coverings, Care must be taken, at the End of Autumn, first to assemble and close their Branches together with Ouziers, and Poles, fix'd into the Ground, that they may form a kind of Bowl, or Pyramid; closing it afterwards with long, dry Dung, as we have done to *Fig-Trees* in *Espaliers*; but yet they must not be uncover'd quite, altogether so soon as the others that are shelter'd by a Wall; and the Coverings must, by all means, be renew'd, during the Spring.

After having explain'd my Method, as well as possible I can, as well for the Pruning of all kinds of young Trees, during the four or five first Years of their being Planted, as for the Trimming of the Buds, and useless Sprigs, and Pinching of such as may stand in need of it, having also explain'd my Method, as to the Culture of *Fig-Trees*, planted either in the open Ground, or Cases; I now proceed, according to my Promise, to explain, with the same Exactness, my Opinion, as to the Pruning of old Trees.

## CHAP. XXXVII.

### Of the Manner of Pruning pretty old Trees.

Since Pruning may be look'd upon as a kind of Remedy for Fruit-Trees, and that really we have made use of the Rules and Principles thereof, in order to render the young Trees in our Gardens more agreeable as to their Figure, as well as more Fertile in fine and good Fruit, than they would have been without being Prun'd; being now to treat about a proper Remedy for Old Fruit-Trees, I am of Opinion, that, to make my self the better understood, I must first of all suppose two things; the one in relation to their Vigour, or Weakness: And I am likewise of Opinion, that it will be proper for me to explain this last Part, before I meddle with the first, this being altogether grounded upon the other; and those vigorous Trees requiring absolutely to be treated in a different manner from those that are not so.

As

## Part IV.

### The Compleat Gard'ner.

As to what relates to the Vigour or Weakness of Trees, we are to say, that those Trees are either very vigorous, producing abundance of thick Shoots, or very weak, hardly producing any, or at most but very small ones; or in fine, neither incline too much to an excess of Vigour, or of Weakness, so as to be in the Case we may wish to have them: These are absolutely the three different Cases Trees can be in.

When they are very Vigorous, and as it were Furious, whether the Beauty of their Figure be already form'd, or not, we must still propose to our selves, that whenever we go about to Prune them, it will be proper above all things, to leave a great Burthen upon them, that is, to leave a great many cut-lets upon them, not only for Fruit-Branches, but also for Branches for Wood; which is perform'd two ways; of which the first is to allow thick Branches preserv'd for the establishing or preserving of a Beautiful Figure, somewhat of an extraordinary length: The second is, not wholly to take away hardly any of their thick new Branches, especially such as shoot outward; but after having chosen in each part of the Tree, among the thick ones, that which appears the best plac'd to Contribute to the Beauty of the Figure, and that with an intention to shorten it moderately, according to its Situation, which I explain elsewhere; after that, I say, the adjacent Branches to that must be cut very short, that is, if they shoot outwards they must be Cut slantingly, within one or two Eyes of the place whence they proceed; if altogether inward, within the thickness of a Crown Piece.

When I speak of allowing somewhat of an extraordinary length in Pruning to a Branch for Wood, I mean a Foot and a half, or two Foot at most, and yet I seldom Practise this my self; but whenever I do, 'tis always with an intention of reducing that extraordinary length to a more moderate one, as soon as the Tree bears Fruit.

In order to understand what is meant by shortning a Thick Branch moderately, it will be proper to remember, that whereas from the Extremity of a thick Branch being Prun'd, several other new ones will proceed, Care must be taken to leave room, that is, an empty Place, where these New Branches may easily lodge themselves, without causing any Confusion among one another, or with those that are there already, or such as are to come; which is the Point upon which I would have People regulate themselves as to the moderate length which is to be allow'd to such thick Branches that are to be Prun'd; but yet, in Regularity, a Vigorous Tree must seldom be allow'd thick Branches, unless they be at least seven or eight Inches in length, and sometimes in Case of necessity they may be allow'd to the number of Eleven or Twelve, always remembering, that the said Branches must be cut shorter, whenever the Tree shall satiate us with Fruit; so that it depends on the Gard'ners Prudence to allow more or less length to such a Branch that is to be shorten'd, and that as well in respect to the Vigour it appears to be of, as to the Place that is to be fill'd up in the Neighbourhood thereof.

When Old Trees are very Weak, commonly the best Expedient is to take them away, and put young ones in their room, after having us'd all the Precaution necessary in such Cases; but if, on the contrary, People will preserve them, they must resolve to disburthen or clear them extremely, either in giving them the Figure which is proper to them, which perhaps they want, or in order to preserve it, if already acquir'd; to which end, they must resolve to leave very few Branches for Wood upon them, and to Prune them all short, that is, five or six Inches in length at most, even resolving to leave but very few weak ones, and consequently no useless ones, especially such as seem to be wasted with Air, without having born any Fruit, or such as are wasted by having produc'd much; for as we have already observ'd in sundry Places, Branches perish in Bearing, and even some Perish sometimes after having born: Therefore those Branches must be considerably shorten'd, or even taken away quite, when they appear altogether wasted, and consequently useless.

But when Trees are moderate, so as neither to fall into the excess of Vigour, or Weakness, but on the contrary, bear a reasonable quantity of Fruit, and at the same time produce Wood in some measure, according to our desires, both for us, and for themselves; in such a Case, those Trees being pretty well shap'd, it will be fit, in relation to them, to follow as well the Rules heretofore prescrib'd for young Trees, as those we are going to prescribe; and if those Trees are ill Condition'd, or ill shap'd, endeavours must be us'd to order them better, which we will visibly discover, after having first Explain'd what concerns the Figure, which is proper for all manner of Old Trees.

Upon this Case, we must moreover suppose, that those kind of Trees are either already defective, and in disorder, or perhaps are upon the point of becoming so: This is the first Reflection to be carefully made at first sight of a Tree that is to be Prun'd, whatever it may be, Wall-Tree, or Dwarf, in order to resolve with more ease upon what is to be done in relation to the Figure.

Perfection of the Figure of a Dwarf-Tree.

A. If the Defects are already happen'd, that is, if the *Tree*, instead of having an agreeable Figure, according to the Idea I have heretofore Explain'd, it has an ill disagreeable one, either in the whole, or in Part.

2d. Perfection. For Example, if it be a *Dwarf*, instead of being low in the *Stem*, A. which is the Perfection of it, of being open in the middle B. which is the second, of being round in the Circumference C. which is the third; and in fine, instead of being equally furnish'd with many good *Branches* round about its roundness D. which is the Fourth; it should on the contrary, be too high in the *Stem* E. which is the first Defect of it; full and Confus'd in the middle F. which is the second; having one side high, G. and the other low, (i. or one side flat, H. or weak, H. while the other is pretty round, and very full, which are the third and fourth Defects.

3d. Perfection. If it be a *Wall-Tree*, whether high in the *Stem*, or low, and short, for as to the *Branches*, the same Rules serve for both; I say if it be a *Wall-Tree*, which instead of being furnish'd to the Right, and Left, as it ought to be with good *Branches*, from the Place where it begins, to the Place where it ends; and that in such a manner, as to be equally garnish'd on both sides, without the least Confusion in the World; in somuch that every *Branch* might easily be distinguish'd, and reckon'd (in which the Great Perfection, and Beautiful Figure of a *Wall-Tree* consists) should on the contrary, be quite unprovided in the middle, shooting altogether upwards, so as to reach the top of the *Wall* in two or three years time, which it ought not to do in less than Eight or Ten; and perhaps, altogether Confus'd besides, and intangled on the one side, while the other appears thin, and unfurnish'd, which are the grand defects of *Wall-Trees*.

Let us now run over all those Defects one after another, beginning by the *Dwarfs*, in order to speak our Opinion precisely, as to the means of Correcting of them, if it be possible.

## CHAP. XXXVIII.

### Of the Defects of Pruning, in Relation to Old Dwarfs.

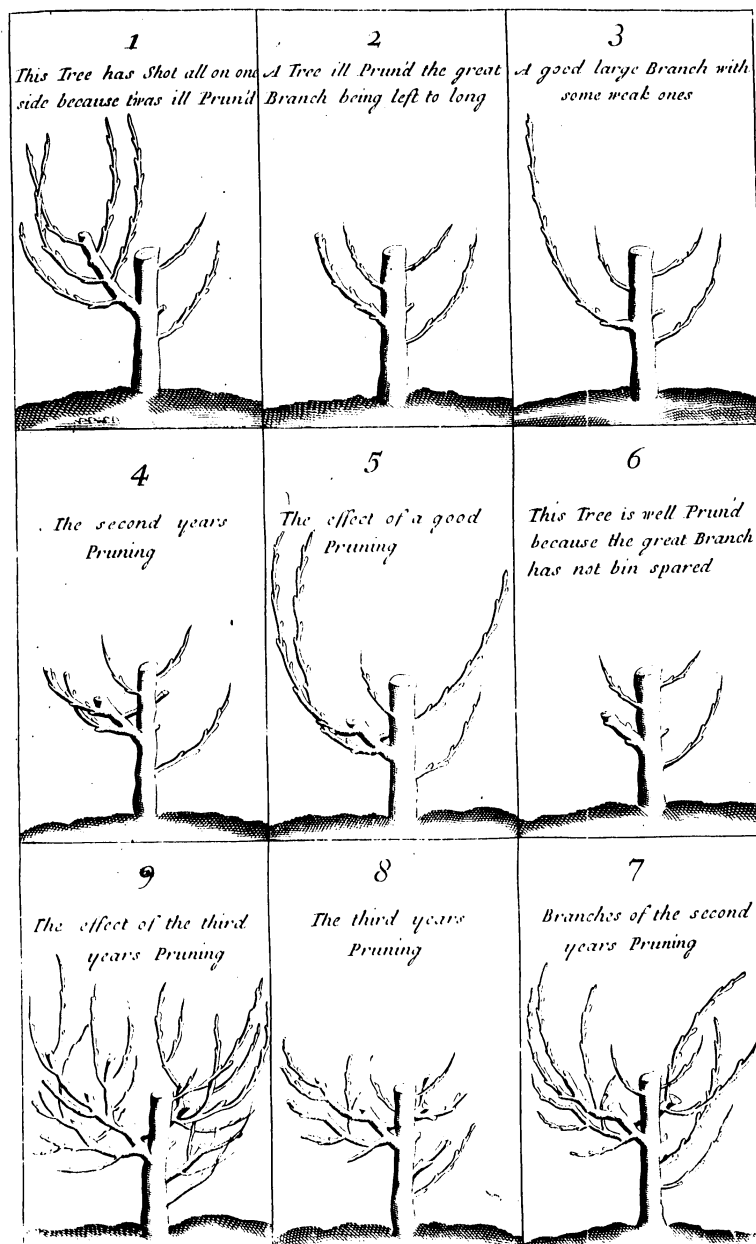
AS to the first Case, which supposes a *Dwarf* to be too high in the *Stem*, I think it need not trouble us much, if the *Tree* has been Planted long, because it cannot be remedy'd without falling into considerable Inconveniencies, which should be wholly to destroy the head of the *Dwarf*, and consequently set it back for the space of three or four years from bearing *Fruit*: The Remedy would be violent, and therefore I do not think it fit to meddle with the *Stem* of such a *Dwarf*, tho' too high, and in that respect defective: In that Case, I am only for Correcting the Defects of the Head.

But when the *Tree* has not been Planted many years, to wit, two or three years, especially the Head being ill begun, and not according to the Rules of Art, my Opinion is to shorten it quite, to reduce it to the Rule, which prescribes it to have a low *Stem*, as it is declar'd in the Treatise of *Plantations*; which I had rather do, than expose my self to leave it always with such a Defect, which must offend the sight perpetually: A *Tree* well Rooted again, and afterwards shorten'd, soon recovers it self, so as to afford a great deal of pleasure, and upon that account we are not only Comforted, but even very much satisfy'd with having shorten'd it in that manner.

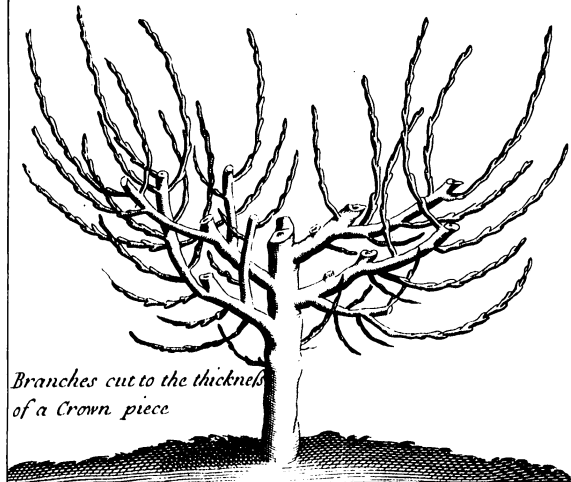
As to the second Defect of a *Dwarf*, which is its being confus'd in the middle; when I meet with a *Tree* thus confus'd in the Figure, and consequently not very proper to bear *Fruit*, I commonly look upon it as I would do upon a Great Lord, who really has a great Estate, and yet is not easie, by reason of the great Incumbrances that lye upon it: The Selling of some part of his Estate, or of a Place, might be capable to clear his Debts; whereas on the contrary, when I see a *Tree* well shap'd, and well dispos'd, I fancy I see another Man, who by the wise Management of a Moderate Estate, wants for nothing, and lives at ease and quiet.

Therefore I am for Correcting that second Defect intirely, as well to afford the *Tree* the Beauty it ought to have, as to facilitate the means of making it bear *Fruit*, and that so much the rather, because the Remedy is easie, and the Success speedy, certain, and without the least danger.

'Tis only removing altogether a thick *Branch* from the middle, or perhaps two or three that cause that fullness; that is, this Confusion; and remove them so, that the *Sap* which had form'd them, nourish'd them, and made them grow, may no longer find any passage

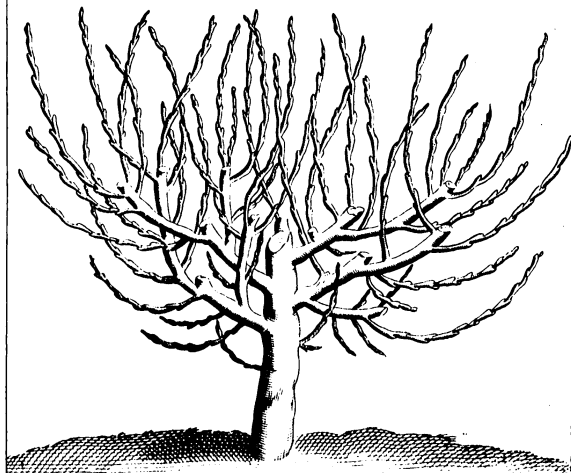


*An old Tree Pruned as it ought to be after having shot  
with a great deal of Confusion*



*Branches cut to the thickness  
of a Crown piece*

*An old Tree that has shot Branches with great Confusion  
every where and chiefly in the middle*



passage to rise up to the same place, there to perform the Functions it was us'd to do; but Care must be taken that this very *Sap* in its common way, or road, close to the first Passage which is stopp'd, may find another as good, and as easie, so that it may be capable of using it, and thereby fully to enter into some thick adjacent *Branches*, just beneath those that have been retrench'd, as it appears by the Figure.

And so there will be no fear of the growing of any false *Wood*, or *Suckers* there, nor of any new Confusion, which would certainly happen, if, in the first place, those thick *Branches* had been cut from the top, over some weak small *Branches*, and consequently incapable of receiving in their small Mouth all the *Sap* which us'd to enter into those that have been retrench'd.

Or, if in the second place, part of the said thick *Branches* of the middle had been left, whereas they ought to have been wholly taken away, or else would make a kind of Stump there.

For the *Sap* returning still from the *Foot* with its usual abundance, and returning through the same Channel it was us'd to, either to the *Stem*, or some thick *Branch*, and finding no Overture large enough to receive it; or perhaps finding none at all, this *Sap*, I say, bursts of necessity round about that small *Branch*, over which the thick one was cut off, or else round about that *Stump*, or those *Stumps* which were left, and in bursting, makes a great many new *Branches* in that middle, and consequently forms there the same defect we endeavour'd to Correct.

I have shown heretofore, that on such Occasions, there are sometimes some Master-stroaks to be perform'd, to leave for a certain time a thick *Branch* over another thick *Branch*, which must be taken away; to the end that, as in the Case of Fountains, which are sometimes vented, lest the Winds might hinder the Water from performing its Function as well as it ought to do, a considerable part of *Sap* may be waisted into those kind of thick useless *Branches*, which otherwise would ruine some dispositions for *Fruit*, ready form'd, or others which might form themselves: But after the *Tree* seems to perform its duty in relation to *Fruit*, we may without any scruple wholly take away such thick *Branches*, that are of no use for the Figure, and have only been left two or three years to waste, as we have said, an abundance of *Sap* which would have been troublesome to us: Besides, the Overture of the *Tree* being made by means of some thick *Branches* that has been taken out of the middle: It will be fit next to examine the remaining *Branches*, whether good, that is, grown according to the most common Order of Nature, or bad, being grown contrary to the said Order; and consequently *Branches* of false *Wood*, in order to preserve as many as can be of the first, which may be useful for *Wood*, or *Fruit*, at the same time, assigning to each the length that may be proper for it, thereby to ruine the ill ones, all, if the Beauty of the Figure requires it, conformably to the Idea we shall have form'd of it, or only part, which may happen when some thick one chances to be sufficiently well plac'd to contribute to that Figure, which without it would prove imperfect.

As for the third defect, which relates to the roundness, it is not so easily remedy'd, as the foregoing; it proceeds from that, when the *Dwarf* was first form'd, Care was not taken to order the Matter so, that the Head of the *Tree* might at least be compos'd of two *Branches*, partly of an equal strength, or thickness, the one on one side, the other on the other, to keep the Vigour of it in some measure divided, or as it were in an *Equilibrium*, (when there happen to be three or four, the thing is yet easier.)

But yet, two may be sufficient to that end, by reason that, as we have said, each of them being afterwards *Prun'd*, as it ought to be, will shoot others on the Extremity of it upon the sides, which others being likewise *Prun'd*, will in their turn likewise shoot others.

And thus, from year to year, *ad infinitum*, still performing a new *Pruning*, good new *Branches* will still form themselves, which will contribute to form, and afterwards preserve in our *Trees* that agreeable roundness, and that abundance of fine *Fruit* we desire.

This defect in the roundness, probably proceeds then from that the *Tree* when it was first Planted, having at the beginning only produc'd one thick *Branch* on one side, with a weak one on the opposite side, as it appears by the Figure; the Gard'ner instead of looking at first on that thick *Branch* as the only one, capable of forming a fine Head, according to the Method I have prescrib'd for the Conduct of those kind of *Trees*, when they are newly Planted; instead of that, I say, has indifferently cut both this thick one, and at the same time, this other small one, leaving them perhaps each of an equal length, without any Prospect as to the Figure, which I hold necessary, and thus the strength of the *Sap* still continuing its first road, which inclines it only to the thick *Branch*, still produces many new fine ones on that side; and, whereas there enters but a very inconsiderable quantity of *Sap* in the small Neighbouring *Branch*, tho' it grew at the same time with the thick one, so it produces but a very small number of small new *Branches*, which perish soon

after;

after; that is, perhaps, after having born a little *Fruit*: Thus one side grows still in Vigour, being extremely well furnish'd, while the other remains weak, languishing, and thin; and consequently the *Tree* being only well on one side, makes a very ugly Figure, half flat, and half round, not in the least answering the Figure that is requir'd in a *Tree* to be perfect, either in it self, or for the pleasure of sight.

Bonum ex  
integrâ causâ;  
malum ex quâ  
libet deficiâ.

From thence it is easie to judge that this defect in point of roundness is great, and even difficult to Correct, at least to be Corrected in few years; however, provided the *Gard'ner* takes Care in *Pruning*, as he easily may, to order it so, that yearly the thick *Branch* he *Prunes* may produce some other likewise thick, shooting towards the side that wants filling, furnishing, and being made round; he may in time, in some measure attain to that round Figure.

Now, in order to understand how this may be perform'd with a little *Care* and *Forecast*, it is fit to remember, that, as we have already said, every *Branch* being *Prun'd*, mult of necessity shoot some new ones on the Extremity of it, and that more or less, according to its thickness, and strength, and the length that has been allow'd to it: A thick, strong, and short one producing commonly a greater quantity, and those finer than either the thick and strong one that has been left long, or the weak one, whatever way it was *Prun'd*.

So that it is most true, that it is possible to *Prune* in such a manner, from year to year, that among the thick new *Branches* (that are to come, and are to grow out of those *Eyes*, or *Buds* that are on the Extremity of the Old one that has been *Prun'd*) there may always be some Principal one, shooting toward the defective side, which consequently must be carefully preserv'd, and *Prun'd* also with the same regards, and thus this defect diminishing by degrees, the Perfection of roundness, which is wanting in the Figure, will be insensibly introduc'd.

In Correcting the third Defect of this *Dwarf*, the fourth is Corrected at the same time; which consists in not being equally furnish'd round about its Circumference; so that this *Dwarf* in losing the Defect it had in wanting of roundness, at the same time acquires the fourth Perfection it ought to have, that is, it becomes as full on one side, as it was on the other.

## CHAP. XXXIX.

### The Defects of Pruning, in Relation to Old Wall-Trees.

**W**E must impute the Defects of *Wall-Trees* to the same Cause, which is a failure in the first years against the same Principles of *Pruning*, which had been transgress'd in the forming of *Dwarfs*, and has now been Corrected by us: That which hinder'd the roundness of those, is absolutely the same thing with that which has hinder'd the Etablissement of that equality of strength, without which the sides of a *Wall-Tree* cannot be equally furnish'd.

That is, the *Wall-Tree* must have produc'd the first year, some *Branches* equally strong, opposite one to another; or if it has shot but one strong one, the whole Beauty of the *Tree* must be founded alone upon that, without trusting to the weak ones that are grown at the same time for any thing, but *Fruit*, and then their Death.

This single thick one, being at the Spring *Prun'd* somewhat short, that is, within five or six Inches, seldom fails, as we have said, of Producing that very year at least two thick ones, with some small ones; which two thick ones will be partly of an equal strength, and oppos'd to each other.

Now each of them having a side to fill, will perform it well, provided the *Gard'ner* still remains Master of the Extremity of them, so as not to let either slip up, as we have fully explain'd in the Conduct of our young *Wall-Trees*; and consequently this *Wall-Fruit-Tree* is commonly only defective by the Negligence, or rather want of Skill of the *Gard'ner*, who being intrusted with the Conduct thereof, has not had all the Regards we have explain'd in this *Treatise* for the *Pruning* of thick *Branches*: And therefore, whereas he may have been deficient for many years together in those *Wall-Trees*, against the good Principles of *Pruning*; it follows, that to repair the Defects of them, there are as many Inconveniences to be fear'd, as we have demonstrat'd, in order to the repairing of those of a *Dwarf*, being shot too high.

When

When the *Trees* are not too Old, I am for sh'ring the thick *Branches* that are, for Example, shot up within two or three years, as well in the Case of Kernel, as of Stone-*Fruit*; those thick *Branches* being short'ned, will produce new ones on their Extremities, which will begin a-new to form the agreeable Figure *Wall-Trees* ought to have; and together with that Figure, will not only bear abundance of *Fruit*, but will bear long, which those kind of *Wall-Trees* shot up too high cannot perform, the common height of the Walls not allowing it: And as for those *Trees* that are Older, perhaps some thick *Branches* may be short'ned, which Expedient is pretty secure in all sort of *Fruit-Trees*, excepting *Peach-Trees* being *Graft'd*; for it is certain, that *Peach-Trees* growing from a Stone, live much longer than others, but then they do not bear *Fruit* so soon; but in recompence, being Cut again, they still shoot Vigorously, which the others that have been *Graft'd* do not do, being Old, Infirm, and Weak, at the end of Ten or Twelve years: This is the reason why they can hardly shoot any new *Branches* through the hard dry Bark of an old *Branch* that shall have been shorten'd upon them.

Therefore, in my Opinion, the best way is to leave those Old *Peach-Trees* in the Condition they are, without Performing the Grand Remedy upon them, which is to shorten them; only *Pruning* them as if they were well-Condition'd, in order to get *Fruit* from them, as long as they are capable of affording such as is Good, and Fair, with a Resolve to destroy them as soon as they cease to bear fruit. In the mean time, I think it very proper to remove the Earth from the sides, which I believe may be wasted; at the same time taking away the greatest part of the Old *Roots* that may be found in moving of the Earth, putting afterwards good new Mould in the room of it, then Plant new *Trees* there, that may be young, and fine, and of the choicest *Fruits*.

As for the other kind of *Trees* that have been Stock'd up, or Shorten'd, either *Pear*, *Fig*, *Abricot*, or *Plumb-Trees*, their new *Branches* must be order'd according to the Rules heretofore Establish'd in the management of young *Wall-Trees*, which without doubt will succeed well.

The first Defect of a *Wall-Tree* being Corrected, which, as we have said, consists in not being so well furnish'd with good *Branches* on the sides, as to have an equality without the least appearance of Confusion; The Second, which consists in having thick *Branches* shot up too high, being but a Sequel of the first, or rather the same thing, will consequently be Corrected by the same means.

The thick *Branches* which a Negligent or Unskillful *Gard'ner* has suffer'd to grow too long, have occasion'd all this disorder, for want of Considering, that whereas the New *Branches* commonly grow only on the Extremity of those that have been *Prun'd*, and never on the lower part; it follows of Course, that the lower part of such as have been left too long of a Foot and an half, and more, must needs form a great Vacuity, or Thinness, and consequently such a *Tree* having been thus ill order'd, can never acquire the Beauty a *Wall-Tree* ought to have, to be effectually in a good Case.

As for the next Defect, which consists in having one part Confuse, that is, too full, while the other wants fullness; it commonly proceeds, either from Old, Small, Wither'd, Useless *Branches*, left by the Ignorant, or Negligent *Gard'ners*, or else from having suffer'd and Cut two, three, or four thick *Branches* close by one another, of an equal length, contrary to a good Maxim which forbids it; it being certain, that since every *Branch* that is *Prun'd*, produces new ones, and often many; it being certain, I say, that if many Cut *Branches* be left near one another, several New ones will of Course shoot from them, which not finding empty places enough to fill up, will cause a Confusion where they are, while another part of the *Tree*, to which that *Sap* might have been directed, which occasions a great Defect here, becomes wretched, and forsaken, and as it were starves.

The Rule which forbids this multiplicity of Thick Neighbouring *Branches* of an equal length, wills one only to be left in every Part, and that of a moderate length; to the end that the New ones it will produce, may severally Garnish some Places, which certainly without this Forecaſt, might prove empty, and thin: And in Case it be thought fit in one place, to leave two or three in proportion, as it proves more or less Vigorous, or Thin in that place, they must all differ exceedingly in length, and look on different sides, which may require being Garnish'd; to the end that the new ones that are to grow, may cause a good Effect, instead of being cumbersome, so as to force one to take them away as soon as they are grown.

I have now declar'd in General what I think proper to Remedy by *Pruning*, the Grand Defects that are happen'd, and still happen daily in Old *Trees*, either *Dwarfs*, or *Wall-Trees*.

There

There now remains to tell, what I think proper to Remedy the Inconveniences that are like to befall Old *Trees*.

Perhaps it may be sufficiently known by the Remarks I have just made, without any necessity of saying more precisely, that it is necessary betimes to establish the equality of Vigour, which being once so establish'd, must be preserv'd; and above all things, it is fit to be diffident of thick *Branches*, which never fail of Usurping a Mastery wherever they begin to form themselves.

*Non nunquam  
in Arbore unus  
ramus ceteris  
est Latior, quem  
nisi resecideris  
tota arbor con-  
tristabitur.  
Columella.*

The Truth is, that these are the only ones that spoil all, by the ill use that is made of them; they cause all the Defects we have now observ'd, and Combated, whereas they are the only ones, which, being made a good use of, according to the Rules we have heretofore Explain'd, must not only Contribute to the Beauty of the Figure of *Trees*, and to make them lasting, but likewise to the abundance of the good and fine *Fruit* they are to produce. And therefore the first thing to be done, is to Examine at first, whether the *Tree* be Conformable to the Idea of Beauty it ought to have, and must be very well understood; or if not, in the first Case, 'tis but following what is Establish'd for young *Trees*; but particularly, when they seem to swerve from a fine Figure, Care must be taken to oppose it with Vigour, and Exactness: So that if one side seems to weaken, Endeavours must be us'd to strengthen it again, by retrenching some thick *Branches* that are superiour to it; that is, when the Condition of the *Tree* can permit it: For as one side never weakens considerably, without the others strengthening at the same time, as soon as it is observ'd that the other side seems to strengthen in an extraordinary manner; insomuch, that some *Branch* shall have thickn'd Considerably, and have produc'd a great number of others, that thick one must immediately be Cut off, over one looking on the weaker side, thereby going to the Exterior Source of that Defect, and stopping it, even in the Original; and so Consequently, whether one *Branch* only, or more, shoot out too much, the current of the *Sap* is turn'd aside; and whereas that *Sap* must of necessity have a Course, if it be stop'd on one side, it will incline to another, and by thus dividing it, we contribute to the equality of Vigour, without which, a *Tree* can never have the Beautiful Figure that is proper to it, and which we ought to Endeavour to procure.

This is for the present all I have to say in Relation to the *Pruning of Trees*, either *Dwarfs*, or *Wall-Trees*: Let us now proceed to the *Vine*, which is not near so long, or difficult to Explain.

## CHAP. XL.

### Of the Pruning of Vines.

OF all the things the Art of Husbandry subjects to *Pruning*, and are commonly *Prun'd* once a year; nothing to me seems to require it so much as *Vines*, and nothing more easily Perform'd: Both which Propositions I am perswaded of, and will prove hereafter. In the mean time, I may say by the by, that Earth hardly nourishes any thing that is subject to more Accidents, or is oftner afflicted, than a *Vine*; but then, on the other side, I may likewise affirm, that nothing on Earth would be happier in its Productions, if the wishes of Men could Preserve it from all manner of Misfortunes. It will not be proper to make the Apology of it here, it not being the design of this *Treatise*; it is daily sufficiently prais'd by others: And tho' I were so minded, I could hardly say any thing in favour of it, that were not tirefome.

The Proof of my first Proposition is grounded upon this, That constantly a *Vine* wanting to be *Prun'd*, Perishes soon after; not in relation to the Foot, which works as it us'd to do, without regard to what relates to the Head, but in relation to the *Fruit*; since it neither produces any so good, so fine, or so well fed, as that which is regularly *Prun'd*, by reason that (Lively and Sprightly as it is, perhaps beyond any Plant we are acquainted with) when it is well, it commonly shoots *Wood* furiously, even several *Branches* in one Summer, and those thick enough, each five or six Fathom long, every one of those shooting at the same time a vast number of bad small *Branches* all along the thick ones, which is a thing sufficiently known by every body.

Now these small *Branches* in relation to *Vines*, no more than the too great quantity of large, thick, long ones in relation to *Pear-Trees*, have no-wise the Gift of Fertility: On the contrary, they remain useless, and so consume to no purpose, a considerable quantity of

of *Sap*, which might be employ'd to produce *Fruit*; therefore it is fit to avoid that great quantity of useless *Branches* upon *Vines*, which can be done no otherwise than by *Pruning*, and consequently it is absolutely necessary to *Prune a Vine*; insomuch, that it is less pernicious for a *Vine* to be ill *Prun'd*, than not *Prun'd* at all: For at least this *Pruning*, tho' ill perform'd, occasions a great benefit, in hindring the *Sap* from waisting, or being dissipated, as it would be in the long *Branches* that we retrench in *Pruning*, it producing at the same time other *Branches* from the Foot, which will prove more useful: From whence it follows, that in our Husbandry nothing requires so much being *Prun'd* as a *Vine*; and indeed, as we have already observ'd, we stand indebted to the *Vine* for the first beginnings of *Pruning*, which is now practis'd so usefully by Gard'ners, and *Vine-Dressers*.

The Reason which made me affirm, that nothing appears so easy to be *Prun'd* as a *Vine*, (and this is my second Proposition) is, that in my Opinion nothing punishes the Defects that are committed in *Pruning* less than a *Vine* does. We have daily a thousand Examples of it in common *Vineyards*, where we seldom meet a *Vine-Dresser* Skillful enough to understand the true method of *Pruning a Vine*, and consequently of giving a good Reason for what he does; and yet those very *Vine-Dressers* seldom fail of having yearly a pretty good *Vintage*, provided the Seasons do not hinder it.

Thus we see that *Vines*, tho' ill *Prun'd*, provided the Foot be in a good Condition, do not fail of producing abundance of fine *Wood*, and consequently a great deal of *Fruit*; therefore I had reason to say, that nothing is more easy to *Prune* than a *Vine*: For indeed, whereas the *Roots* of it are extremely Active, they produce abundance of *Sap*, which of Course makes a great many large new *Branches*, especially upon those that have been *Prun'd* the year before. Every one of those new *Branches* commonly shoots *Fruit* on the fifth and sixth *Eye* or *Bud*, and even pretty often on the seventh; and that which is singular in a *Vine*, is, that it produces its *Fruit* at the same time with the *Branches*; for the *Fruit* does not grow afterwards here, as it does on the *Branches* of other *Fruit-bearing Plants*: And indeed, no *Fruit* must be expected on a *Vine*, unless it comes out at the same moment with the *Branches*, which is a truth known by every body.

Commonly every good new *Branch* produces at least two fine Bunches of *Grapes*, which seldom fails; and this furnishes a pretty considerable quantity of Wine; but when every *Branch*, or at least the Major part produces Three, which happens sometimes, then we have a full *Vintage*; supposing always, that neither Hail, Frost, or bad Rains, especially those, which falling at the time of the *Blossom*, make the *Grapes* run; I say, supposing those Enemies to *Vines* have spoil'd nothing in its Productions.

I need not mention in this *Treatise* of the *Pruning of Vines*, the manner of Planting; or Multiplying it; for besides that, it is not a proper place for it, nothing can be more generally known, than those two Articles are: So that I shall only insist upon the *Pruning* part, which I look upon to be very necessary, by reason of four or five sorts of *Grapes*, that are commonly introduc'd in our *Gardens*, and are indeed the Chief Adornments of them, I mean *Muscadins*, which are the most Considerable; the others are *Chasselas*, *Precoceles*, or early *Grapes*, *Canrars*, even *Bourdelais* not being excluded; not indeed for the same Reasons proper to the others, but for the Reasons explain'd in that part, which Treats of the good use that is to be made of the Walls of every *Garden*; and shews that *Bourdelais* are useful both for *Leaves*, and *Verjuice*.

I shall begin this small *Treatise* of the *Pruning of Vines*, by saying, that among the good *Grapes*, which Compose part of our *Gard'ning*, and the common *Grapes* that grow in *Vineyards*, there is particularly this great difference; that in our *Gardens* we neither require abundance of Bunches, or abundance of *Grapes* upon those Bunches; we desire thin Bunches, with few *Grapes* upon them, provided they be large, firm, and crackling; to the end that the Season for Maturity being favourable, we may have the pleasure we had propos'd to our selves; which never happens when the *Grapes* are too close; whereas in *Vineyards* they have different Prospects, and with reason, desiring nothing so much, as the abundance of Bunches, and quantity of *Grapes* upon each of them.

I say, moreover, that a good and well amended Soil is not proper to produce good *Grapes* in our *Gardens*, especially for *Muscadins*; we rather want a Soil moderately fat, provided it be not too much worn, and be well situated; and lastly, provided the *Plants* are neither too old, nor too young; And, in case they be very Vigorous, not too close one to another, so as to cause a Confusion; all which Conditions are very necessary for the goodness of *Muscadin*, and without doubt to contribute considerably to it, nothing can be of more use, than a Skillful *Pruning*.

In Order to Perform it skillfully; we are to Examine two Principal Things; first, the Vigour of the whole *Plant* that is to be *Prun'd*; and secondly, the Thickness or Strength of every *Branch* upon which the *Pruning* is to be perform'd; for as to the time of *Pruning*, nothing is to be added to what has been said of the time of the *Pruning* of *Trees*, since all the same Considerations are to be had in the *Pruning* of *Vines*, as have been had in the *Pruning* of *Fruit-Trees*.

As to the first Point in question, viz. the Vigour of the *Plant* (which is known by the thickness, and number of new *Shoots*) the Chief thing to be done, is always to leave a great burthen to those *Plants*, that are very Vigorous; I mean a great many *Prun'd Branches*, whether those *Plants* have as yet but one Arm, as when they are very young, or have many, as they may have after the fifth or sixth year of their being *Plant-ed*: But yet, in either Case, that great Burthen must be so well mannag'd, that it may have no Confusion: And whereas very Vigorous *Plants* must be greatly burthen'd, so always in proportion, few Cut *Branches* must be left upon such as are but moderately strong, and yet less upon those that are very weak.

As to the second Point, which relates to the thickness of every *Branch* upon which the *Pruning* is to be Perform'd; always supposing the regards I advise for the best Plac'd, which I will explain in the Sequel. That being done, I am always for *Pruning* upon the thickest *Branches*, which indeed are the best; at least it must never be perform'd upon the Weak ones; so that if the *Trimming* of the *Buds*, and useles *Branches*, that is necessary to be done yearly in the Month of *May*, had not taken away abundance of small *Shoots* that commonly grow upon the *Stock*, or upon some Old *Branch*, they must be remov'd at the time of *Pruning*, weak *Shoots* not producing near so much as the thick ones.

The *Branches* to be *Prun'd* being chosen, which, as we have already declar'd, must always be the thickest, and best plac'd, we must now regulate the length that is proper to be allow'd to each of them: This Length ought commonly to be limited to four good *Eyes*, or *Buds*, (which are the four first to be reckon'd from the Place whence the *Branch* has taken its Birth) unless it be with a design to make the *Plant* of that *Vine* rise all on a sudden, or else in the space of two or three years, a great deal higher than it is, or else to make it garnish some distant place, in a short space of time; in which Case, it may be allow'd a great deal more length than we have now Regulated; but still on Condition, that when it shall once have reach'd that height, or propos'd distance, it must, if it prove well, always be kept to that, as it may be done with ease, by means of the *Pruning* I Practise, only yearly performing that *Pruning*, within the compass of the moderate length above mention'd.

In the performing of this, as well as all other manners of *Pruning* of *Vines*, these two Precautions must be had; both of which are pretty Material: The First is, to Cut within a large Inch of the *Eye* or *Bud* that is to be the last, I mean on the Extremity of the *Branch* that is *Prun'd*, by reason that if it were cut closer, that *Eye* would be wounded by it, and would not produce so fine a *shoot*: And the second is, to order the Cut so, that the slope may always draw towards the side that is opposite to that last *Eye*, for fear the *Water*, or Bleedings which never fail dropping from that part that is *Prun'd*, when the *Sap* begins to rise, should fall upon that last *Eye*, because it might prove prejudicial to it.

From those four *Eyes* or *Buds* left upon the *Pruning* of a Vigorous *Plant*, especially against a Wall, may always be expected four new *Branches*, one from each; each of which, as we have already said, will be furnish'd with two or three Bunches of *Grapes*; that is, every good *Branch* being *Prun'd* within the compass of four *Eyes*, provided, no ill accident befall either of them, which happens sometimes, may produce four good new *Branches* together, with eight, ten, or twelve Bunches of *Grapes* for Autumn; so that one *Plant* of *Vine*, upon which, at the Spring, shall have been left two good *Branches* *Prun'd*, may yield that very year twenty, or twenty four Bunches of *Grapes*; and another having four good *Branches*, may yield to the number of forty, and so it might rise *ad infinitum*; always remembering to proportion the burthen in *Pruning*, to the Vigour of the *Plant*; likewise noting, that such an abundance can only suit with *Vines* Planted against Walls.

I repeat again, that in *Pruning*, a great difference is to be made between a *Branch* shot from the *Pruning* of the preceding year, and another; for indeed the first can only be look'd upon as a *Branch* of false *Wood*, and consequently, must be absolutely remov'd, unless there be no other upon the *Stock*, or that it may be of use, as it is pretty often, in order to shorten the *Stock* close to it, being necessitated so to do, both to keep within the bounds of the height we affect, and because Old *Branches* perish, in time, at the end of a certain

certain time, and so consequently the old *Wood* being grown infirm, and useles, it must needs be remov'd, as soon as it is perceivable.

Now, since for the Reasons above said, it has been thought fit to preserve some *Branches* shot from the *Stock*, for instance, one or two in one and the same place; in such a Case they must be shortned within the compass of two *Eyes*, in hopes of two fair good *Branches*, upon which we may lay the foundation of our hopes, for the re-establishing of such a *Vine*, whether it be the whole *Plant*, or only part of it, continuing during that year the common *Pruning* upon some higher *Branch*, in order to have *Fruit* that year, resolving to ruin it intirely, the *Fruit* being gather'd.

We have declar'd elsewhere, that *Muscadin* requires a pretty deal of heat, adding thereunto, that it dreads the excess, as much as the Mediocrity, or want of it: Therefore, as in Moderate Climes, like *France*, *Muscadin* requires being plac'd to the South, or at least to the East, against Walls: So in very hot Countries, like *Languedoc*, and *Prouince*, it dreads those kind of Situations, by reason that the heat being too scorching, the *Grapes* wither, and burn, instead of ripening, and therefore only thrive there in the open air, where indeed they attain a miraculous Perfection, inso much, that all the Industry of Man can never reach that Perfection, in Countries that lye somewhat to the North; for which Reason, we are oblig'd to confess, that tho' we need not envy other Climes for all other *Fruits*, viz. *Peaches*, *Plums*, *Pears*, *Apples*, and even *Figs*, and *Melons*, &c. yet in our Climes we can never approach the happiness of Meridional Countries for *Muscadins*.

It is to be observ'd particularly, that *Muscadin* never thrives well against a high *Trellis*, it is always close, small, and flabby; wherefore I am not for placing it against such, neither must it (especially in *Espaliers*) be kept so low that the *Grapes* may touch the ground, or for the water of Spouts to spurt gravel against it: For which reason, I affect a height of three, four, or five foot at most, particularly for *Muscadin*, inso much, that the *Fruit* on the *Espalier* may neither be much higher, nor much lower; this is what I meant heretofore, when I spoke of a *Branch*, which being thick, is fit for *Pruning*, provided it be well plac'd.

The same height is likewise very proper for *Chassellais*, *Currans*, and early *Grapes*, &c. but not so necessary: *Grapes* that do not grow against Walls, indeed may, and ought to be kept much lower, whatever they be, but still we must not swerve from the Maxim which forbids that *Grapes* that are to be eaten raw, should touch the ground.

The length for the *Pruning* of every *Branch* of *Vine* being regulated, it will now be proper to examine to the bottom the burthen that is fit to be left upon every *Plant*, which is the most difficult, and most material Point.

When the preceding years *Pruning* has produc'd three, or four *Branches*, as it may do, and often happens; then supposing the *Vine* to be of the height above-mention'd, I begin, by removing wholly all the weak ones, and as to the others, unless the Mother *Branch*, be very Vigorous, I never preserve above two of them, and chuse the thickest, because that, as we have already said, they are doubtless the best, always chusing, as much as can be, the lowest, provided they be thick, otherwise I keep to the highest; after that, I *Prune* them both, tho' not of an equal length, that is, allowing them each four *Eyes*, I only allow it the highest of the two, which I call the *Pruning*, and leave but two upon the lowest, which I call a *Stump*; resolving at the same time, to remove the highest quite the following year; together with all those that shall shoot from it, reducing my self wholly to the two that shall grow from that shortest *Branch*, provided the said *Branch* succeeds according to my hopes, and appearance; for if any accident should happen to it, so as not to produce two fine *Branches*, it shooting perhaps but one, I fix still to the finest, and lowest of the *Pruning*, either to keep two of them, in case the short *Branch* has fail'd quite; or at least, I preserve one for *Pruning*, the short one having shot one, that may serve for a short one the following year: This is the Method I daily attempt, not to swerve from the height I affect, as good, and necessary.

I affirm, that by this Method, accompany'd with some Culture, and the common Custom of Couching *Branches* from time, to time, in order to get new *Wood*, when the old begins to appear wast'd; as also with the help of a little *Dung*, or rather some renewing of *Soil*, when any diminution of Vigour is perceiv'd; I say, I affirm that such a Method will constantly preserve every *Plant* of *Vine* in a good Case, Vigorous, and without any Wounds, it will produce fine *Grapes*; and consequently, if the Season, and Clime contribute to afford it due Maturity, it will yield the Satisfaction that was expected from it.

But when the *Plant* of *Vine*, especially of *Muscadine*, is extraordinary Vigorous, as it happens pretty often, inso much that the three, or four *Branches* it has shot from every

*Branch* that has been *Prun'd* prove very thick; I am for preserving of them all, *Pruning* both the one and the others of the Length heretofore speci'd, as well the highest for *Pruning*, as the lowest for a *Stump*; and in order to have room to place without Confusion all the Young ones that are to proceed from that, I pull up some Neighbouring *Plant* that might stand in my way: I likewise affect sometimes to choofe for my *Pruning* the meaneft of those *Branches*, always forming my *Stump* upon the lowest of the thick ones, after which I cut the thickest that are near that mean one, that may be fit for *Pruning* within one *Eye*; in order that those kind of *Stumps* may wait part of the Fury of the *Foot*, and that the mean *Branch* I have chosen for the best may not be inconvenienc'd by it, and made to bear Close *Fruit*, as it would certainly do, if it receiv'd the Vigour of all of them; so that in such a Case, I do not Cut the highest over the lowest, as I use to do, when the *Plant* is but moderately Vigorous.

When our *Muscadines* are in Blossom, the thing in the World I am most desirous of, is, that which, excepting Frost and Hail, is most to be dreaded for *Vines*, and that is Rain, in order to make part of the *Grapes* weep away, without which they would be too close, as well as too small and flabby; therefore when Nature does not allow me that Rain according to my desire, I endeavour to supply it with Waterings, which for the most part succeeds well: I must confess that it is very Troublefome for such as have a great many *Plants* of *Muscadine*, but yet the Experiment may be try'd upon a smaller Number.

When the Year proves Extraordinary Drie at the season of Maturity, if my Soil be naturally very Drie, I Water the *Foot* of my *Vine* largely, especially when the *Fruit* begins to turn; such a Watering, when necessary, and well perform'd in the Month of *August*, Contributes certainly to the largeness and firmness of the *Grapes*.

When the *Fruit-Bearing Branch*, I mean the new *Branch* of that Years growth, is not of a monstrous thickness, as some of them prove sometimes, I Cut it in the Month of *July*, close to the *Fruit*, being careful at the same time, by means of some Neighbouring Leaves, to shelter the *Fruit* from the great heat of the Sun, until it be at least half ripe; for when it draws near Maturity, and this is a general Rule, it is proper to keep it a little bare, in order to afford it that Yellow Colour, which becomes it so well: The Cutting I just mention'd, augments the Nourishment of the *Fruit*, and commonly contributes to make it larger, and more crackling, but it is not always certain nor infallible, neither must it be done, when the *Branches* are very thick; for whereas in the *Summer* they shoot almost as many small new *Branches*, as they have *Eyes* or *Buds*, those *Branches* growing thick, would in course occasion a great Confusion, for even when the *Branches* are not thortned, they notwithstanding shoot, during the *Summer*, abundance of those *Buds*, which must be carefully pull'd off, as being very Useless.

Happy are those who are in such Situations, where *Muscadine* yearly ripens well, I cannot forbear envying their good Fortune a little. Happy likewise are those, who having *Muscadine* in an indifferent Climate, and pretty ill Ground, are favour'd with such a *Summer* as we had in the Year 1676, for it is most certain, that we have Reason to be contented with that Years *Muscadine*.

But it is not sufficient for our *Vines* to have abundance of fine *Bunches*, and those not over stock'd with *Grapes*, nor for the Season to be favourable to make them Ripen well, we have besides other considerable Enemies to dread for those *Grapes*, as well as for *Fig-Trees*, which are, besides some Frosts which make the *Leaves* fall, and long Cold Rains, which Rot the *Grapes*; Birds and Flies of several kinds; as to the first, the best way to prevent their Mischief, is to hang Nets before those *Grapes* which will hinder the Birds from coming near it; but that remedy is not very easie, when there is abundance of *Muscadine* to be preserv'd: As to the Flies, we have the Remedy of Viols, that must be half filled with Water mix'd with a little Hony, or Sugar, which Expedient is sufficiently known by every Body; those Viols must be hung up in divers Places about the *Vines* with some Pack-Thread, and those Insects seldom fail of getting into them, being attracted by the Sweetness of the Honey and Sugar, and there certainly perish, as soon as they are got in, not being able to find the way out again; at least abundance of them are destroy'd that way, tho' it is almost impossible to destroy them all: Care must be taken besides, to empty those Viols, when any Considerable number of those Flies are taken, otherwise no more of them would be taken, the Corruption and Stink they are Subject to, hinder the others from coming there: Then the said Viols must be fill'd up again, as before, and plac'd a-new in proper Places.

Paper bags, and Linnen Cloths, are likewise us'd to cover every *Bunch*, but besides that it is a kind of Slavery, if on the one side it serves to preserve the *Grapes* so inclos'd from the Birds and Flies, on the other side, it hinders the Sun from affording them that same Yellow Colour, which is so agreeable to sight, and Contributes to make them better, as well as

to show their perfect Maturity: For to imagine that it preserves the *Grapes* the longer ripe, is an Error I have experienc'd; The Reason is, that *Fruit* begins to Rot, as soon as it is thoroughly Ripe, and even sometimes before; and as soon as one *Grape* is tainted, it spoils the next, the next another, and so ad infinitum, which is a very considerable Inconvenience, not so easily discover'd when the *Grapes* are enclos'd, as when they are bare; as soon as a *Grape* looks tainted, it must be pick'd, to hinder it from infecting the rest.

I must not omit adding, that in such years as produce an infinite quantity of *Bunches*, as the year 1677. It will be fit to take away part of them in those places where they are too thick, as also too thin, those *Bunches* that appear too close, or too full, as well as to shorten on the lower Extremity such as seem too long, that Extremity never ripening so well, as the Top, which always ripens the best of any other part.

I should likewise add, that no *Grapes* must be gather'd, especially *Muscadine*, until it be perfectly ripe, since perfect Maturity is absolutely necessary to afford it that sweetness, and flavour, without which, nothing can be less agreeable than *Muscadin*: But this Advice shall be compos'd in one of the Chapters of the following Part; wherein I shall examine whatever relates to the maturity of every particular *Fruit*.

## The End of the Fourth Part.

O F



OF  
FRUIT-GARDENS,  
AND  
Kitchen-Gardens.

VOL. II. PART V.

CHAP. I.

*Concerning the Care that is Requir'd to Pick Fruits,  
when they are too abounding.*

**W**Hereas the Intention of our Culture is not only to promote fair Fruit, but especially to have it fine, and large; hoping thereby, and with Reason, that it will be the better for it, goodness seldom failing to attend Beauty, and Largeness of Size: And, whereas neither Pruning, nor the Trimming of the Buds, and uselefs Branches, the Tillage, or Improvements of the Ground are always sufficient to afford us this Beauty, and Size; it follows from thence, that there is something else to be done, which is that I am to Treat of here.

It is certain, that when we neither meet with Frosts, or North-East Winds, at the time that the Trees Blossom, and the Fruit knits; that is, in the Months of *March, April, and May*; I say, it is certain, that pretty often in some parts of the Tree there remains too much Fruit for it to be very Beautiful; for in the first place, in Relation to Kernel-Fruits, whether *Pears*, or *Apples*, it is most certain that every Bud commonly produces many Blossoms, and consequently may produce many Fruits; that is, to the number of Seven, Eight, Nine, and Ten, &c. In the second place, as to Stone Fruits, altho' every Bud, excepting only plain *Cherries*, *Morello's*, white and black *Hearts* and *Bigarreaux*, produce but one single Fruit, (for indeed, one *Peach-Bud*, and one *Plum-Bud* only produce one *Peach*, and one *Plum*;) yet, as every one of their Fruit-bearing Branches, is commonly

burthen'd

burthen'd with a great number of Buds, all close to one another; it follows, that upon every one of those Branches there may remain an excessive quantity of Fruits, and therefore the same Argument we use for the Buds of Kernel-Fruits, may stand good for this; which is, that the more Fruit there knits upon one Bud, the smaller the Portion must be; which at the shooting out of the Stalk out of that Bud, distributes it self to every individual Fruit; inasmuch, that if the quantity were less, 'tis most certain that the Portion of every one of the remaining would be the larger, and consequently, the Fruit being the better fed, would be larger, and commonly better.

So likewise, the more Fruit there is upon a Branch of Stone-Fruit, *Peach*, *Plum*, or *Apricock-Trees*, &c. the smaller is the portion of Nourishment, which distributes it self to every *Peach*, and every *Apricock*, on such Branches; so that had there been less upon every Branch, the Fruit would certainly have been better fed, and consequently larger, and commonly better; since indeed, it is almost impossible to have at once Largeness, Beauty, and Goodness, when there is too much Fruit, either upon one and the same Bud, or upon one and the same Branch.

It follows from thence, that a Skillful Gard'ner, who takes care to make his Trees Blossom (which is in some measure in his Power to do) it follows, I say, that he must likewise take yet more care to leave no more Fruit on every Tree, and particularly on every Bud, and on every Branch, than in proportion to what he may judge, that the Tree, or rather the Branch, is capable to Nourish, in order to have that Fruit Beautiful.

I say, particularly the Branch; for, whereas the distribution of the Nourishment which is destin'd to every one, is perform'd at the first entrance of the Branch, according to the largeness of the Overture thereof, and not according to the multitude of the Fruit it is burthen'd with, nor the measure of Nourishment it may stand in need of; it follows, that the Fruit of every one only receives the benefit of that which Nature allows the Branch it grows on, without receiving the least benefit of that which it allows the Neighbouring Branches, every one of them having their peculiar Functions, and separated Works, which is so certain, that a Tree sometimes bearing but one or two Fruits, or at least, but a small quantity, that Fruit is no finer than if it had produc'd a far greater quantity.

It likewise follows from thence, that the encrease of Sap, or Nourishment, which may happen to every individual Fruit, only proceeds from the retrenchment that is made of the too great quantity of Fruit, which grew on every Bud, or upon the same Branch upon which it is found; as if every Bud, or every particular Fruit-Branch made particular Families, having every one their particular Income, and each their Servants to nourish; inasmuch, that as the one receives no benefit from the abundance of the others, so the Children of every one in particular, have a greater share of nourishment; when the same food, which, for Example, might have been divided, or shar'd among Ten, is only divided among Two or Three.

Therefore it is certain, that we must leave but few Fruits upon every Bud, and upon every Branch, if we design to have them all both larger and finer; and whereas in Pruning every Tree, I leave as many, and sometimes more good Buds, and good Fruit-Bearing Branches upon it, than it seems capable to Nourish, being sensible of the hazards that are to be fear'd, before the Fruits of every one are safe; and being likewise desirous that all the Fruits of every Tree should be partly equally Beautiful, I never fail, after the Fruit is knit, to make an exact review of that which every Bud and every Branch contains, in order to leave no more on each Place, than it is likely to be able to Nourish plentifully.

It is likewise certain, that, pretty often, Nature seems to take care to purge, or disburthen it self of what it is over-burthen'd with; at least the Spring sometimes produces of those Frosts, and North-East Winds, we have already mention'd, which happen also pretty often between the Months of *July* and *August*; those kind of North-East Winds are Terrible shakers of Fruits; they beat down abundance of it, and some times too much, and that without the least discretion or measure, either in respect to the whole Tree, or to Every Branch, in so much that such years have a great Scarcity of Fruits, and often to Excess: But yet whatever Misfortune it may have caus'd, we must not fail still to make a review of what is remaining, to take away such from some Places, which in Prudence we judge to be overburthen'd.

But then again, those Frosts and Stormy Winds do not always happen, and then the greatest part of the Fruit, which has knit, remains upon the Trees, and thus in the midst of Plenty, as to Number, we may really call our selves poor as to Beauty, and goodness, having nothing fine enough to Honour our Culture.

In such a Case, I think it very proper, to ease Nature of a Considerable part of its Burthen, in the following manner.

*First*, It is fit to tarry, until the *Fruits* be pretty large and well form'd, in order to take away such as are superabundant, and particularly to preserve the most Beautiful and most sizeable; since that great Number consists both of good and bad, to which end we must commonly tarry until the end of *May*, and the beginning of *June*, at which time *Fruit* is large enough to facilitate our Choice.

But this Picking or Culling must be Perform'd sooner for *Apricocks* than any other *Fruits*: Whereby we derive an advantage, which is not met with on other *Trees*, a very good use being made of small green *Apricocks*, which we cannot make of other small green *Fruits*, at least hitherto we have not found the way of it, tho it were perhaps to be wish'd we might.

*Secondly*, We must be careful to allow every *Fruit*, as near as we can, as much Room as it may require, for the size we know it is to be of, when it approaches to Maturity, and that particularly for those kind of Principal Stone-Fruits, which have short Stalks, viz. *Peaches*, *Pawies*, or *Purple-Peaches*, *Apricocks*, &c. otherwise they would obstruct each other in growing, and it often happens that those that are equally large destroy each other, or at least the strongest get the better, that is, the largest destroys the smallest, and thus the Nourishment which those Wretches have receiv'd during two or three Months, is lost in vain; whereas it might have been employ'd to advantage, had care been taken to take off some of those that were worst plac'd betimes; for by that means those that should have been preserv'd, would have receiv'd the benefit of the Nourishment which was waisted on their Neighbours.

It follows from thence, that you must never leave those kind of *Fruits* near one another, tho' they are Commonly so, several of them growing together, witness *Apricocks*, or at least two and two, witness *Peaches*: For commonly the Blossom Buds of *Peach Trees* only grow two and two, both very close to one another, being only divided by a small Eye, for *Wood*, which is a small beginning of a *Branch*, which Places it self between the Two, and for the generality only shoots a few Leaves, and no *Wood*; but when it shoots Vigorously and Forms a pretty fair *Branch*, then there is no necessity of removing one of those *Fruits* which on both sides accompany the *Branch*; their Natural Situation keeping them at sufficient distance, and without doubt both of them will prove very Fine, provided nothing else press them while they are thickning, which as I have said, must be carefully look'd to; but in case the Shoot be but weak, and slender, it must not hinder the removing of one of the two *Peaches*: Moreover, as those kind of small Shoots are commonly at a stand even in *June*, it is very proper to shorten them at that very time to an Eye or Bud, in order to save the Nourishment, which would be waisted in them to no purpose; besides those are the Shoots which generally cause a Confusion; it will suffice to leave a Leaf or two upon each, to shelter the *Peach* from the Heat of the Sun, and that during all the time, of it's Tenderest Infancy; Shade being so very necessary at that time, that without it the *Peach* might perish, being uncover'd, before its being come to some Maturity.

*Autumn and Winter Pears*, especially such as are recommendable for the largeness of their Size, for instance, *Beurre* or *Butter-Pears*, *Bon Chretien*, *Virgoule*, &c. do likewise stand in need of that Picking or culling of *Fruits*; by reason that too many of them being left together upon one Knob, they will seldom prove very fine, one will suffice upon each, or two at most, and even those must appear pretty large, according to the Season, and both of an equal Size, for the one being less than the other, will always remain so, and consequently ill favour'd, which far from deserving to be preserv'd, since it could not attain the Size it ought to have, only serves to wrong the other, which would have thriven the better had it remain'd alone upon that Bud.

As for *Summer Pears*, for instance small *Muscat*, *Robins*, *Cassolets*, *Rousslets*, &c. there is no such absolute necessity to Pick them, they must only be us'd like *Plums* and *Cherries*; they are *Fruits* of an Ordinary and Regular Size, and are commonly good of all Sizes, provided they be Ripe, and not tainted by Worms.

*Thirdly*, It must be noted, that, when the *Branches* of *Peach-Trees*, upon which in *Pruning* we have left as many Blossoms, as we thought fit, which, as we have already noted, is always to some Kind of excess; when those *Branches*, I say, do not appear in the Month of *May* to receive Considerable Success of new Sap, so as to thicken, or to shoot fine *Branches* on their extremities; In that Case, as I have declared more at large in the

Treatise

Treatise of *Pruning*, we must not only take away a great part of the *Fruit* which is already knit upon them, but even shorten the *Branch* extremely, and that to that part from which the finest Shoot proceeds; for otherwise certainly the best part of the *Fruit* would drop before its being Ripe, or at least would remain very small, and consequently bad, it being most certain, especially as to Stone *Fruit*, that unless they approach to that Size which is proper to their kind, they never attain the delicacy they ought to have. The *Peaches* remain Shaggy and Green, and do not quit the stone; they are Sowrisht, and Bitterisht, the *Pulp* is Rough and Course, and often Mealy, the Stone is much larger than it should be, all which are certain Marks of an ill *Peach*.

*Fourthly*, The *Pears* which remain in too great a Number, are apt not only to hinder each other from thickning, but likewise to Rot, the Air and the Wind not having a free passage about them; this Inconveniency is sufficient to Inform us, that part of them must be taken away, that the remainder may be at more Liberty and Ease.

In my Opinion, it is very necessary to Observe in this Place, that it is absolutely necessary, especially in relation to *Winter Bon Chretien Pears*, in the Months of *April* and *May*, which is the time in which they begin to appear Knit and Form'd, to be greatly Careful to destroy small Black Caterpillars which are very numerous at that Season, which otherwise would gnaw the Rind of those *Pears*, which is the Reason we often meet with them crooked and uneven.

## CHAP. II.

To Learn to uncover, at a proper Time, certain Fruits which require it.

**F**RUITS being thus pick'd upon every *Tree*, they thicken by degrees under the Leaf, some more, others less, every one according to its kind, some sooner and others later, each according to the time Nature has design'd for their Maturity; but whereas the Red, or Carnation Colour are necessary to certain *Fruits*, which may receive it, if not hinder'd, or not have it if hinder'd, (for there are some which absolutely can never attain it, what ever may be done, for instance, *White Peaches*, *Verte Longue*, or *Long-Green*, *Green Sugar Pears*, *White Figs*, &c. there are likewise others, which, tho never so cover'd, ever receives the Colour of their Kind, for example *Cherries*, *Rasberries*, *Strawberries*, &c.

Whereas, I say, Colour as to certain *Fruits*, is a very material condition, in order to render them the more valuable, and that they can never attain that Colour in Ripening, unless the Rays of the Sun light directly upon them, it is proper at certain times to remove some Leaves which shade them too much, and consequently are prejudicial to them, in relation to that Colouring; nay more, they are prejudicial as to the Maturity of those *Fruits*, it being most certain for the generality, that a *Fruit*, much cover'd with Leaves, cannot Ripen altogether so soon as another, which is more expos'd, and moreover has not so much delicacy.

But a great deal of Prudence and Discretion must be us'd in this case; and care taken not to uncover *Fruits* until they have almost attain'd their proper size, and begin to lose the great Greenness they had till then; *Fruits* begin to thicken from the moment they are Knit, until the beginning of *June*; and afterwards, as *Gard'ners* say, they remain for a considerable space in a kind of Lethargy without thickening, at least Visibly; for I do not question but they thicken a little, and that above all some Matter enters into the Inside of the Body of the *Fruit*, since the *Roots* are continually preparing some, and sending it immediately upwards; this matter indeed remains press'd under the Rind, which is the reason *Fruit* is so hard at that time; but finally the time which is regulated for their Maturity approaching, this very matter, tho' condens'd, begins to rarify, and to extend in few days, whereby the *Fruits* begin to soften and thicken more, and consequently to approach to Maturity.

This is the only proper time to uncover them, at two or three different times, and that during the space of five or six days; for if they were uncover'd sooner, or all at once, the great heat of the Sun would certainly occasion a great disorder upon that tender

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Rind, not yet accusom'd to the open Air; this truth is confirm'd by too many Experiences, when either through the Ignorance of an unskillful Gard'ner, or by some unlucky Frosts, the *Fruits* are uncover'd before that time; the same cause which splits the Rind of *Fruits*, likewise dries up the Stalks, and Consequently the *Fruit* Withers and Rots, as it happens pretty often in *Vinyards*, which at the beginning of *Autumn*, are afflicted with some over hasty Frosts.

Let us return to the Colour, which is desirable for most *Fruits*, and say that it Imprints it self in few days on those that have been long cover'd, as it appears by *Peaches*, *Apricocks*, and especially on the *Quince Apples*, &c. and that therefore those are much to blame, who neglect the procuring of so great an advantage to their *Fruit*, when it is so easily done. Moreover, in order to render that Colour more Bright and Lively, it is not improper, to use a kind of Seringe made on purpose, with several little holes at the end of the Spout, like those of a Watering Pot, to water them twice or thrice a day, during the greatest heat of the Sun: Such a watering softens the Rind, and is of wonderful use to that end; especially for *Apricocks* and *Peaches*, and it likewise succeeds well for *Bon Chretien Pears*, and *Vergoules*, &c. Which remain somewhat Whitish, and which having a fine thin Rind, are consequently susceptible to receive that fine Colour, which becomes them so well.

### CHAP. III.

#### Of the Maturity of Fruits, and the Order Nature observes in it.

**I**N fine *Fruits*, having attain'd their Size and Colour, and the time of their Maturity being arriv'd, it behoves us to improve those rich Presents which Nature treats us with; it is a Liberality, or rather a Profusion it yearly bestows upon us, as if it thereby delighted to recompence the Care, and Industry of the skilful Gard'ner which Cultivates it.

Two things are to be Consider'd in every *Fruit*, the *Pulp* of the *Fruit* and the *Seed* of the *Fruit*, the *Pulp* which is proper for the Nourishment of Man, and the *Seed* which lying in the heart of that *Fruit* as in a Scabberd, receives its perfection by degrees, as the *Pulp* makes an end of Ripening; this perfection of *Seed* being apparently design'd for the Multiplication of the Specie of that *Fruit*; but this I only speak by the by, yet it appears often that the *Seed* is of no use at all.

Perhaps it may be urg'd in relation to that *Seed* or *Fruit*, that Nature seems to perform in *Trees*, in respect to its *Fruits*, the same thing in part, which it performs in *Animals*, in relation to their Young ones; No body can be Ignorant of the extraordinary earnestness of *Animals* to Nourish and Preserve their Young, and that to a certain Point, that is until they attain that perfection of Size, and Strength, which every one stands in need of, either to Subsist of themselves, or to labour afterwards to perpetuate their kind at the times which Nature prescribes.

Insomuch, that till then those *Animals* Fathers and Mothers, can hardly suffer, without resistance, nay sometimes without Fury and Cruelty, any Body to touch, much less to take away their Young ones; but when those Young ones are grown big, Nature endeavouring on one side to Employ those Fathers and Mothers with the Care of a new Multiplication, and on the other hand to excite those Young ones, as it were, to make a Figure in their kind, inclines those Fathers and Mothers to abandon them, and to cease Nourishing and Protecting of them; insomuch that those Young ones being grown big, shift for themselves, no longer looking upon the Authors of their Being, or keeping them Company, otherwise than as indifferent Strangers.

Thus we see that *Trees*, which are really the Fathers of the *Fruits*, take care for a while to nourish those *Fruits*, and to preserve them, as if, if I may use the Expression, they Suckled, or Hatch'd, or Heated them with their Leaves, and that to a certain Point, that is, until they are come to the full Perfection of their Size, and Maturity: But then, Nature seeing them in a Condition not only of Subsisting without the assistance of the Father that has produc'd them, but likewise of Perpetuating and Multiplying their different kinds, seems to withdraw the affection of the Tree; Insomuch, that before that time the *Fruit* seems to stick closer to the Tree than it does afterward: But when those *Fruits* cease

to receive the wonted help, they no longer stand in need of, and sticking no longer to the Tree by the former Tye, they quit their Father and Mother, they drop, they keep asunder, and lastly are abandon'd to themselves, &c.

As to the *Pulp* of those *Fruits*, it is to be Noted, that the degree which approaches nearest to what we call Rotteness, (which is their destruction,) is the perfection of their Maturity, insomuch, that they are never perfectly good to Eat, until being absolutely Ripe, they are near spoiling.

Therefore, unless the Gard'ner be careful to gather his *Fruits*, and make use of them; when they are entirely Ripe, he will be in danger of seeing them perish, some through a Rotteness, which begins at first in some part of the Body, as it happens with most *Apples*, and others by growing Mealy, as *Peaches*, some by growing Soft first, as many *Pears* do, especially such as are Tender, as *Butter-Pears*, others by growing Dry and Shaggy, as most *Musc-Pears* do; all which are different ways Conducting to Rotteness and Destruction. When this happens, Man is Subject to some inward checks of Nature, which seems to reproach him for his not having been Capable of Improving her Liberalities towards him.

It might be question'd in this Place what Maturity is, and how it is perform'd, both which questions are pretty agreeable, but of no great use to a Gard'ner. First, as to the Definition of Maturity, perhaps considering the great Proximity between it and Corruption, we can hardly give a better, than to say, that it is a beginning of Corruption.

The Truth is, that in speaking of a thing which passes for a Perfection, it seems pretty odd to make use of a Term, which expresses a defect, and is really disgusting; but then to soften the signification of that Expression, it will suffice to say, that there are several degrees of Corruption; many *Fruits* are Corrupted and Rotten, without ever having been Ripe, which Corruption is a real defect, without the least Perfection. On the contrary there are other *Fruits*, which never begin to Corrupt unless they have attain'd the utmost degree of Perfect Maturity, which Corruption is really a defect for the *Fruit*, but is at the same time a Perfection for the Eater: Thus we may say, that a Piece of Wood which becomes a Circle, receives a degree of Corruption in relation to it self, since it ceases to have the Figure which Nature had given it, but it receives a Perfection in relation to the Workman, who forces it to take that bend, which it stands in need of for his use.

As to the manner, how Maturity is perform'd, the difficulty is much greater, and more puzzling; for tho the Sun shining directly upon the *Trees* seems the only Author of the Maturity, of the *Summer Fruits*, by means of the Air, to which it has given a proper degree of Heat; yet we cannot say in general, that it is the only and last Author of the perfect Maturity of all manner of *Fruits*, since those which are gather'd without being Ripe, Ripen of themselves in the *Store-House*, where the Sun no longer shines directly upon them.

Therefore, it will be more proper and more likely to say, that the Sun indeed begins the Maturity of those *Fruits*, which remain upon the Tree, to a certain degree of Perfection, without which the *Fruits* shrink and spoil, without having enjoy'd the benefit of the real way of a good Maturity, and that after this the greatest Crudity having been thus consum'd by the Heat of the Sun, as all Natural Bodies are Subject to Corrupt, some sooner, others later; one part of the *Fruits* of the *Store-House* arrive at last to the Period of their Existence, which often proves the Point of an agreeable Maturity; another part likewise meets its end in a precipitated Rotteness, which may proceed either from too much Cold, or too much Heat, or too much Moisture, &c.

We might likewise Please our selves with asking, whether those *Fruits*, which are soonest Ripe, are better for the Health of Man, than those which are longer before they attain their Maturity. The like question might be made, as to those that are Imperfumd, and those that are not; such as have *Kernels*, and such as have *Stones*, &c. But whereas those Gallantries are of no use to the matter in hand, I shall Wave them, and proceed to the Instructions that are necessary, in order to learn to gather *Fruits* Seasonably, without losing my Time in needless Philosophy.

First, Then, Care must be taken to understand that Maturity rightly, as also that not only every kind of *Fruit* has a time, or regulated Season for its Maturity, but likewise that of every Particular *Fruit* in its Season, some have as it were, about Weak to be good in, and no more, as the *Rousslets* or *Russetins*, *Beurre* or *Butter-Pears*, *Birgams*, *Verte-Longue* or *Long-Green*, &c. others not above a Day or two, and nothing beyond it, as *Figs*, *Cherries*, most *Peaches*, &c. some have a great deal longer, as *Grapes*, *Apples*,

*Apples*, and most *Winter Fruits*, for Instance, an *Apple* or *Bon Chretien Pear*, will be good to Eat for a Month or fix Weeks together.

Moreover, it must be Noted, that every kind of *Fruit* has its peculiar marks of Maturity, either such as Ripen upon the *Tree*, or such as only Ripen some time after their being gather'd.

Altho Generally the Common time of Maturity of every kind, is within the Compass of the knowledg and understanding of Common *Gard'ners*, who commonly are pretty able to distinguish which are *Summer*, which *Autumn*, and which *Winter Fruits*, &c. Yet it is certain that the singular Marks of the Maturity of every *Fruit* in particular, to take them in the very nick of time, that is, the precise time of their Maturity, those Marks, I say, are properly reserv'd for the knowledge of a Gentleman who will use some Application about it, without which nothing is more Common than to see *Fruits* serv'd, either before their being Ripe, that is before they are good, or else pass'd *Fruits*, that is, too Ripe, and consequently nought, and that at a time too, when without doubt, there are others, which having attain'd a just Maturity might supply the Room of those, and which for want of being us'd at that time, have the misfortune to lose their Delicacy, and the Value they deserv'd.

One would think that there were but little to be said upon the Subject of this Maturity of *Fruits*, and yet the extream Application I have us'd about it for a long while, has convinc'd me of the Contrary. And whereas all the Expence, all the Care, and all the Pains People have been at, to get *Fruit*, would prove vain, if having Compass'd it, they were still at a loss, not knowing how to make the good Use of it they propos'd, I think my self Oblig'd not to Omit the least Circumstance of any thing that may seem Useful to that End.

I have already fully Explain'd in the Treatise of the Choice and Proportion of *Fruits*, which are the *Fruits* not only of every Season, but even those which are of every Month, so that perhaps it would be tiresome and needless to Repeat it here; so that the only thing in Question now is, to give a true Explication of what Relates to the Particulars of the Maturity of every *Fruit*, and if Possible to give the World a greater Insight into that Knowledge, than it has had hitherto.

Above all things, I would have an Ingenious *Gard'ner* so well Skill'd in that Point, as never to Present any of his *Fruits*, Especially of those that are Tender and Mellow, as *Peaches*, *Figs*, *Plums*, or *Pears*, unless they were in a just degree of Maturity, in so much that those they are presented to, may take the very first, without the least fear of being Disappointed, or at least may be able to chuse with the Eye, without being reduc'd to Picking, and Squeezing, that is to spoil the *Fruit*, before they can meet with any to their liking.

My Intention is, that this Picking and Squeezing, which hitherto may have been Pardurable, or Tolerable, shall no longer be allowable, unless it be at the *Tavern*, or among ordinary People, and such as have little or no nicety, or else such as have no *Fruit* but what they Buy at the *Market*: And even there I would not have those Squeezers, Squeeze any where but near the Stalk, and that gently too, Sticking to the first which yields to the Thumb, to the End that one Part only may be tainted by this Squeezing (which occasions a beginning of Rottensets) besides they may assure themselves, that whatever *Fruit* is Ripe near the Stalk, is sufficiently so every where.

One of the most Considerable Defects I am to Combat here, is the Precipitation wherewith I observe most of the Curious are inclin'd, to begin betimes to Cause the *Fruits* of every Season to be Eaten; nothing is more Common than to see that when People have begun ill, they continue during all the Season to Eat their *Fruit* ill Condition'd, by reason that as Naturally the desire of Eating *Fruit* continues from the Moment we have begun to do it, it commonly happens, that in gathering the Second or Third time we commit the same Fault we had been guilty of at the first; whereas if we tarry to Eat those that are in Season until we have a sufficient quantity Ripe to give, we have ever after the satisfaction of Eating none but such as are incomparably good.

Therefore, I advise all *Gard'ners* never to begin gathering until there be a visible Appearance of a happy Continuance.

I am likewise to Combat another great Defect, of some of the Curious, which is seldom or never to serve any *Fruits* until they be pass'd, the Number of those is very considerable: Their fear of its not lasting long enough, or of not having enough for some occasion or other, or rather their Ignorance in point of Maturity, occasions all this disorder: Therefore I will Endeavour to Remedy those two Defects.

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But first, I cannot forbear to admire, in this place, the Providence of Nature, not only in what relates to the succession of that Maturity, which we see in relation to every kind of *Fruit*, commonly to make the one Ripen in one Season, and the other in another; but also in what relates to the Order of the succession of the Maturity of the *Fruits* of every *Tree* in particular, which it conducts to Maturity by degrees; as if it really intended to allow Man, for the Nourishment of whom it seems to have produc'd them, time to consume them all, without suffering any to perish: And, indeed, it is observable, that Nature likewise observes the same Order for the forming, and the opening of the *Blossoms* of *Trees*, and *Plants*, which produce *Fruit*, as it does for *Plants* which only produce *Flowers*; for instance, *Hiacints*, *Tuberoses*, *Carnations*, &c. the *Buds* whereof only open by degrees, as if design'd thereby, the longer to delight the Senses of Humane Creatures.

In effect, tho' every *Blossom* of a *Tree* does not commonly last above four or five days in its perfection, yet every *Tree* appears in *Blossom* for a Fortnight, or three Weeks together, which certainly proceeds from that the *Blossoms* are Originally form'd, and afterwards open one after another; those that are form'd first, open first, as those that *Blossom* first, have the advantage of producing those *Fruits* which ripen first; thus the second and third *Blossoms*, which are like so many younger Sisters, successively form'd after the Elder, seem to perfect themselves, while those delight our Eyes; those second, and third *Blossoms*, I say, in imitation of a well-regulated Family, are not to open, and shew themselves, until the Elders have had their Career; so that those Elder fading, in order to produce the first *Fruits* of their Season, the young ones appear, to form those *Fruits* which are to be the second, and third, in Ripening, &c.

Although we have observ'd in every *Tree* an order in the succession of the Maturity of the *Fruits*, in relation to each other; we do not find this same Order of Succession of Maturity observ'd for the *Fruits* of another *Tree*, of a certain kind, in respect to the *Fruits* of another *Tree*, which is of another certain kind, whether both have *Blossom'd* at one and the same time, or whether the one have *Blossom'd* sooner, the other later: For instance, all *Peach-Trees* *Blossom* at the same time, and yet some *Peaches* Ripen about the middle of *August*, and others do not Ripen 'till towards the end of *October*; and likewise other *Fruit-Trees*, either *Pear*, *Apple*, or *Plum-Trees* *Blossom* almost all in one and the same Month, and yet that kind which *Blossoms* first, does not always Ripen first; Nature Orders it otherwise, which I can give no Reason for: The *Pear* of *Naples* for Instance, is the first that *Blossoms*, and almost the last which comes to Maturity.

Therefore, as it is most certain, that *Fruits* ripen one after another, so it is likewise true, that, as *Aurora* Users in, or declares the coming of the Sun, so the Maturity of *Fruits* is declar'd, or preceded by some particular marks, the knowledge of which, I have made it my business to study; and I am of Opinion, that I shall oblige the Curious, by acquainting them with my Observations.

'Tis certainly very difficult to be very exact as to the precise time of the just maturity of *Fruits*: Nothing is so common as to be deceiv'd therein, as we have already declar'd, either in gathering them too soon, or too late; besides, there are some in which the Point of Maturity is so momentary, as the white *Butter-Pear*, the *Maudlin-Pear*, the *Doyenné*, the *White of Andilly*, &c. that whatever Care be taken, it is almost impossible to hit that Point of Maturity exactly, it passes so swiftly, when once 'tis come; neither am I fond of having many of those kind of *Fruit*.

As nothing is more delightful than to eat well-condition'd *Fruits*, nothing can be more disagreeable than to eat them green, or over-ripe: Not but in my Opinion, this last defect is less tolerable than the first, by reason that all *Fruit* that is over-ripe, far from having any taste, is commonly insipid, and mealy; whereas *Fruit* that is not quite ripe enough, though on the one side it may set the Teeth on edge, yet on the other it discovers part of its Virtue, by the briskness of its taste, and by its *Pulp* drawing near perfection; most Women in this, will be of my Opinion.

Moreover, as in this particular Case of Maturity we have two sorts of *Fruit*, of which, the one are good, from the moment they are gather'd; for instance, all Stone *Fruits*, some *Summer-Pears*, and all Red-*Fruits*, &c. it follows, that none of those should be gather'd until they be ripe, by reason, that how little time soever their Maturity may last, they preserve themselves much better, and longer upon the *Stock* than they would do being gather'd: There are other *Fruits* which are only good sometime after their being gather'd; for Example, most Kernel-*Fruits* that are Mellow, and constantly all *Autumn*, and *Winter-Fruits*. In Order to give true Rules to understand the Maturity of all manner of *Fruits*, I think it will not be improper to begin here with those that are fit to be eaten as soon as gather'd; I shall not mention the others, until I come to the Treatise of the *Store-Houses*, or *Fruit-Rooms*.

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## CHAP. IV.

*How to judge of the Maturity and Goodness of Fruits.*

THree of our Senses have the gift of judging of the appearances of the Maturity of *Fruits*, *Viz.* Sight, Feeling for the most part, and Smelling for some, I say only to judge of the appearances, for the Taste is the only and real Judge to whom it belongs to Judge Solidly, and without appeal, as well of the Maturity, as of the Goodness, it is sufficiently known that there are some *Fruits* which are neither good nor agreeable to the *Pallat*, tho' actually ripe.

Sometimes one Sense alone is sufficient, to Judge certainly of the appearances, and even of the reality; for instance, the *Eye* alone suffices for all *Red Fruits*, and for *Grapes*, &c. it Judges with certainty of the Ripeness of a *Cherry*, a *Strawberry*, a *Raspberry*, a Bunch of *Red*, or *Black Grapes*; when both the one and the other are all over Painted with that fine Colour, which is natural to them: And on the contrary, when any part does want it, the *Eye* thereby judges, that it is an infallible Mark, that all the rest is not yet arriv'd to its just Maturity.

So likewise, Feeling alone judges very well of the apparent and effective Maturity of *Tender Mellow Pears*, whatever they be; so that even the *Blind* are as able to judge of it by feeling, as the most clear Sighted, both by feeling, and touching.

Sometimes it is necessary to employ two of our Senses, Seeing, and Feeling, barely to Judge of the appearance of Maturity; for Example, for *Figs*, *Plums*, and *Peaches*, and even *Apricocks*, it not being sufficient for a *Peach* to appear ripe upon the *Tree* by its Beautiful Colour, red on the one side, and yellowish on the other, thereby to judge that it is fit for gathering; neither does it suffice after their being gather'd, for them to be without *Stalks*, besides this fine Colouring, though commonly it is a good Mark, the *Stalk* always sticking to those kind of *Fruits*, until their being ripe, at which time the *Fruit* quits it with ease, and the *Stalk* remains fix'd to the *Tree*; but whereas this *Stalk* may have been sever'd violently, their appearing without a *Stalk*, may chance to prove a false Mark of Maturity.

Those Signs alone, as to those kind of *Fruits*, I say are not sufficient, to Judge absolutely by the *Eye* of their Maturity, the *Hand* must likewise act its part, and concur therein, tho' not to touch it roughly upon the *Tree* (nothing is more offensive to me than those Gropers, who, to gather one according to their Mind, will spoil a hundred by the violent impression of their Unskillful Thumb) but I would have the *Hand* play its part in the manner I shall explain hereafter.

The *Hand* must likewise be us'd for a *Peach* that is ready gather'd, when we are not certain it was gather'd by a Skillful *Hand*, but then it must be perform'd very gently, and that, as I have already said, near the *Stalk*.

In case it be a *Fig*, whether gather'd, or not, it is allowable to touch it gently with the end of the *Finger*, almost in the same manner as a Chyrurgeon feels for the *Vein* in order to Bleed; for in case that *Fig*, after having appear'd to the *Eye* of a yellowish Colour, a shrivel'd *Rind*, with some Crannies, the Head hanging down, and the *Body* shrunk, likewise appears very Mellow under the *Finger*, and that being still upon the *Tree*, may be loosen'd by the least motion, it is very fit for gathering, and without doubt ripe, and good: But if, notwithstanding all those fine appearances, and all this Mystery, it does not easily quit the *Tree*, the gathering of it must be deferr'd for some days, it is never perfectly good, while it resists in gathering.

When a *Fig* having all the good Marks of Maturity, has been gather'd by a Skillful *Gard'ner*, and is afterwards presented to any body, they may freely, and without any rough feeling, judge it to be fit to receive, and eat.

We may say the same thing of a *Plum* ready gather'd, that is, that if besides the Beautiful Colour it ought to have, which satisfies the *Eye*, and the Mellowness which Skillful *Fingers* have discover'd, without offering it any violence, it proves without a *Stalk*, being a little shrivel'd, and wither'd on that side; it may be infer'd from thence, that it is perfectly ripe, and consequently fit to take.

Likewise if this *Plum* being still upon the *Tree*, finely Colour'd for the *Eye*, and Mellow for the *Finger*, comes off with ease, without a *Stalk*, it is without doubt fully ripe, but if not, like the *Fig*, it must be left some days longer upon the *Tree*.

Two things may be infer'd from this remark about the *Stalk*, the first is, that it must not stick to some kind of *Fruits* when they are ripe; for instance, *Peaches*, *Plums*, *Strawberries*, *Raspberries*, &c. inasmuch that none of those *Fruits* should be eaten, while the *Stalk* sticks close to them; and the second, that it may, and ought to stick to others, tho' never so ripe; for Example, to *Figs*, *Cherries*, *Pears*, *Apples*, &c. to which, the *Stalks* serve as an agreeable Ornament, and their being without it, would be a kind of Defect.

After having demonstrated, that in some *Fruits*, for Example, *Red Fruits*, the *Eye* alone is sufficient to judge of their Maturity, and in others, as *Tender Mellow Pears*, the feeling only; as also that some others require both Seeing, and Feeling, *Viz.* *Peaches*, *Plums*, *Figs*, &c. we may add, that there are still some others in which Smelling may be admitted with Sight, in order to Judge with more certainty, for instance, *Melons*, after having approv'd their Colour, *Stalk*, and Beautiful Figure, and examin'd their Ponderousness, it is not improper to smell to them before we cut them, to be able, as 'tis thought, thereby to judge with more certainty of their Maturity, and Goodness, tho' at the same time I am convinc'd, that those which have the best scent, or favour, are not commonly the best: This Maxim is sufficiently well establish'd.

But, in fine, generally speaking, all the Marks above explain'd, to distinguish Maturity, may chance not to be certain, and infallible; they are Exterior Signs, which might be term'd Signs of Philogony, and consequently deceitful, something more is necessary in this Case, it requires matter of Fact; and therefore, as we have already declar'd, Taste only can decide in this Point; and, if I may use that Expression, that only can affix the Seal, and the Character of an absolute Decree, as a Judgment, which is to be Pronounc'd, particularly in the Case of Goodness; for let the Exterior Marks be never so favourable, unless the *Peach*, *Plum*, and *Melon* please the *Pallat*, after having pleas'd the other Senses, as it happens sometimes, all the Preliminaries are useless; therefore we must submit all to the *Pallat*, however with this scruple, which I cannot remove, for the establishing of real goodness, which is, that Tastes are very different in themselves, and that a thing which may please one Man's *Pallat*, may displease another's: But this discussion is out of my Province; the Ancient Maxim (*de gustibus*) forbids my meddling with it, and thus I can only speak of my own in particular, and at the same time applaud those who have the good Fortune of liking that which does not seem good to me: It would be Ridiculous in me to endeavour disabusing of them, since probably I shou'd only lose my labour.

## CHAP. V.

*Of the Causes of the forwardness, or backwardness of Maturity, in all manner of Fruits.*

**F**ruits Ripen sooner, or later, first, according as the Months of *April*, and *May* are more or less warm, to cause the *Trees* to Blossom, or Knit.

Secondly, according as those *Fruits* grow against a good Wall, or good Shelter, that is, expos'd to the *South*, or *East*; and, in fine, particularly according as they are in a hot Climate, and light Earth.

All which Considerations are very material for the forwardness of *Fruits*; for the Months of *April* and *May* proving hot, the *Fruits* knitting the sooner, they will consequently ripen the sooner; witness the maturity of *Melons*, which is an undeniable Truth; *Fruits* being, as it were, in respect to their Maturity, like Bread, in respect to its being Bak'd the sooner, or later, according to the time of its being put into the Oven.

When *Fruits*, tho' knit betimes, are in the open Air, or only against some Walls expos'd to the *West*, or *North*, &c. they will advance but little, for want of the assistance of the heats of the Springs, and likewise, if notwithstanding the advantage of a pretty hot Season, and happy exposure, they are in a Cold Climate, nay, tho' in a moderate Climate, the Earth being Course, and consequently Cold, they will not ripen so soon, as those which have all things favourable.

For Example, all manner of *Fruits* ripen sooner, in *Langhedot*, and *Provence*, which are hot Soils, than in the Neighbourhood of *Paris*, and even in those parts of *Paris* *Fruits* Ripen much sooner within the City itself, and in the Subburbs of *St. Anthony*, and *St. Germain*.

*Germans*, as well as at *Vincennes*, at *Maisons*, *Carriere*, &c. where the *Earth* is light, and hot, than they do at *Versailles*, where the *Ground* is cold, and coarse.

All those places are too near one another, to impute those differences in point of Maturity to the Sun; besides, there is a difference between the immediate heat of the Sun in respect to the maturity of *Fruits*, and the immediate heat of the Fire, in respect to the Meat it Roasts, or Boils. Fire first affecting the Exterior parts of the Meat which are nearest to it, before it performs its Function on the inside, which is at more distance; whereas the Sun Ripens the inward parts, before the Exterior; in effect, the inward part of *Fruits* always Ripens first, and softens first, and likewise commonly is the soonest spoil'd.

If I may be allow'd to declare the Reason which to me seems most plausible in this Point, I shall say, in the first place, that Maturity proceeds from two Causes, the one near and immediate, which is the heated Air, the other not indirect, and distant, and that is the Sun which heats that Air; so that the Function of the Sun is to heat the Air as much as the Winds will allow; and the Function of the Air so heated, is to impart its heat to the Earth, and so to all the *Plants*; this *Earth* thus heated, causes first the Principle of Life which lies near the *Root* to Act, and then the *Root* it self, which consequently prepares *Sap* as soon as it is put in Action; and that *Sap*, at the same time, rises to perform its Function into all the Superior parts, where it can penetrate.

In the second place, I shall say, that the Air of every Climate is in probability compos'd, or at least considerably mix'd with the Vapours, and Exhalations which rise from the *Earth* of that Climate, which in my Opinion, is the Reason of Peoples saying, that the Air of such a Country is good, and the Air of such another is bad.

Thirdly, I shall say, that it follows from thence, that that Air is more or less easy to be heated, according as the *Earth*, from which those Vapours rise, is more or less cold, and material; for those Vapours participate altogether to the Nature of that *Earth*, and therefore that as in light *Earths* the Air sooner receives the impression of heat, by reason of its being form'd by more subtle Vapours, it consequently the sooner heats both that *Earth*, and the whole Body of the *Tree*, and the *Plant* it nourishes; which is the Reason that it is the *Roots* being sooner heated at such times, and in such *Earth*, and consequently the *Saps* being sooner prepar'd, which form inwardly in those *Fruits* the first degrees of Maturity.

Therefore it is certain, that the Air, according to its being more or less thick, is also more or less apt to receive heat; and that according to its degrees of heat, it either advances, or does not advance Maturity, as it has advanc'd, or not advanc'd the heat of the *Earth*.

Therefore the forwardness, or backwardness of Maturity, depends on the Conditions above explain'd, in so much, that they must all Combine; that is, that *Fruit* in order to Ripen betimes, must knit betimes; and next, must meet with a favourable *Exposure*, a hot Climate, and light *Earth*.

## CHAP. VI.

### Of the Particular Marks of Maturity in every kind of Fruit, and first of Summer-Fruits, which Ripen altogether upon the Tree.

According to the Natural Order of the Maturity of *Fruits* of every Season, the Honour of Eldership certainly belongs to early *Cherries*, and next to *Strawberries*, *Raspberries*, and *Gooseberries*, &c. The first commonly begin to appear in the Month of *May*, and that a little sooner, or a little later, according as the Conditions we have explain'd, are more or less favourable: *Strawberries* begin to Blossom about the middle of *April*, or a little before, in good Situations, and in cold places, not before the latter end of *April*, or in the beginning of *May*; and happily, none of those small Frosts which are apt to blacken, and spoil those first Blossoms intervening, Ripe *Strawberries* may be expected at a Month's end: And as for early *Cherries* that have Blossom'd about the middle of *March*, we may expect to have them about the beginning of *May*, not altogether Ripe, but half Red, with which Colour they may serve as well, as if they had attain'd a full Maturity, since they are only considerable, and valued for their Novelty, especially by Ladies;

dies; for after all, at that time it is only a little colour'd Cloak, which only serves to cover a little softer *Pulp*, and a large Stone; and therefore they stand in need of the assistance of a Confectioner, to require an Excellency, which the *Gard'ner*, or rather the Sun has not had time to afford them.

The *Trees* of a pretty Cold Climate Blossom almost as soon as those of a Climate that is somewhat hotter, by Reason that the opening of those Blossoms seems to be perform'd independantly from the Action of the *Roots*, witness the *Branches* that Blossom, being Cut, (the bare force of the Rarefaction caus'd in the *Bud*, by the presence of the first Rays of the Sun, is capable of producing this Effect) but as for the maturity of every *Fruit*, it can only be perform'd, and perfect'd; First, by a great Concurrence of the Operation of the *Roots*, and Secondly, by a certain degree of Heat in the Air, which is necessary for the Perfection of that Manner-piece: Now this Heat, both in the *Earth*, and in the Air, can only proceed regularly from the Rays of the Sun; and yet I dare affirm, that I have been so happy as to imitate it in little for some small *Fruits*; I have made some to Ripen five or six Weeks before their time; for instance, *Strawberries* at the end of *March*, and *Peach* in *April*, *Figs* in *June*, *Asparagus*, and *Cabbage-Lettice* in *December*, *January*, &c. But we can find no facilitations to imitate this Heat in Great, to cause the *Fruits* of Large *Trees* to Ripen in an extraordinary manner; therefore it is apparent, that tho' Nature has abandon'd the *Earth* to us, leaving it in our Power to Heat some Portion thereof, to make it produce against its will, by means of a Foreign borrow'd Heat, what we have a mind to; has, notwithstanding, reserv'd to it self in a particular manner, the Universal Faculty of the maturity of *Fruits*; this maturity in relation to us, is the Finisher, and Perfection of the production of the *Earth*; in so much, that without it, all our Cares and Industry for the generality, only afford us some hopes, which often prove false, and deluding.

I have said heretofore, that we may begin to have some early *Cherries*, in the Month of *May*, those small *Fruits* have an open Field at that Time, they are the only that appear in our *Gardens*, and that grace our Tables; they are Rival'd by no others until the end of the Month, which is the time of the displaying or opening the Grand Magazine of the other Red *Fruits*; and these remain in possession until the end of *June*, and towards the middle of *July*; for the early *Cherries* which seldom appear but in *China-Dishes*, and in small quantity, are follow'd close by *Strawberries*, with this difference; that these, to endear themselves the more, above the *Cherries* that have preceded them, appear with a Charming scent, and in prodigious quantity; that is, in full Balons, and would think themselves disgrac'd to appear as poorly attended, as their Predecessors.

Among these *Strawberries* some are Red, and others White, the last are seldom Ripe until they are grown yellowish, and the others are never good, until they are perfectly and Universally Red; and neither of them are eatable, until they have attain'd a Considerable size.

I may say by the by, that those *Strawberries* that are soonest Ripe, are those that have Blossom'd first, and that those that are nearest to the body of the *Plant*, are those that Blossom'd first; I will draw some Instructions in the Treatise of the *Kitchen-Garden*, in order to our getting of them always Finer, Larger, and Better, from that part, than otherwise we should do.

The *Strawberries* that grow Naturally, and of themselves, which most People are fond of, are accompany'd towards the middle of *June* with Red and White *Raspberries*, *Currants*, *Hearties*, and Plain *Cherries*, of which, some are somewhat earlier, and not so good; others later, which are larger, and sweeter, and better, either Preserv'd, or Raw: *Bigarreaux* also come in among them, and even *Morrello's*, but commonly they both tarry until the hurry of Red *Fruits* is somewhat over; not but they might appear sooner, for really those *Bigarreaux*, and *Morrello's* are admirable *Fruits*: The first are Ripe, as soon as they are half Red, but the others do not attain their perfection of maturity, until they are almost Black. The order of the maturity of all those *Fruits* is the same with what we declar'd for the *Strawberries*, that which has Blossom'd first in every *Tree*, likewise Ripens soonest.

Here's the Month of *June* provided for, it is call'd the Month of Red *Fruits*, and with Reason: For those kind of *Fruits* are met with wherever one goes; we have said that the marks of their maturity is that Red Colour which surrounds them; it commonly begins at that part which is most immediately expos'd to the Sun, and is soonest Ripe; in fine, by degrees that Colour spreads all over, and when the liveliness of that Red begins to turn to an obscure Red, excepting only the *Morello's*, they draw towards Corruption.

Among Red *Fruits*, those that have Stones, tho' never so ripe, do not easily loosen from the *Branch*, as other *Fruits* do, they wither upon it, instead of falling, they must be pluck'd off, and that with some Violence.

All those kind of Red *Fruits* should be the only ones during the whole Month of *June* to fill up the Stage of the maturity of the *Fruits* of that Season, but that some *Espaliers*, expos'd to the *South*, in Dry Sandy Grounds, begin to produce towards the end of *June* some little *Muscate-Pears*, and some early *Muske-Peaches*.

Those small *Pears* are Extraordinary good, if they be allow'd the time of Ripening; the first marks of their maturity appear in them as in all other *Pears* of every Season, that is near the *Stalk*, which part must appear a little yellowish, and somewhat Transparent; and afterwards, for a greater mark of full maturity, that yellowness must appear a little through a certain Tan'd Colour, and a certain Red, which covers the remainder of the *Rind*; and Lastly, they must begin to drop of themselves, without any exterior violence; at which time it will be proper to gather, and eat them. I have sufficiently declar'd my Opinion as to the goodness of that *Pear*, in the Choice of *Fruits*.

When People do not allow themselves the time of examining about the *Stalk* of the *Pears*, to judge of their maturity; they must, as I have said, judge by the natural dropping of those kind of *Pears*, but then the Worms must have no share in it, and they must neither be grown upon a sick *Tree*, nor upon a sick *Branch*; *Pears* that are infected with Worms drop soonest, and soonest seem Ripe, without really being so, their defect is not much conceal'd, it appears generally in the middle of the *Eye* of the *Pear*, and when it does, there's no depending upon it for good *Fruit*.

All manner of *Fruits*, both Stone, and Kernel, Ripen sooner upon sickly *Trees*, than upon sound ones; but we must not suffer our selves to be deceiv'd by the size, for it often happens, especially in relation to *Peach-Trees*, that the *Fruits* of those languishing *Trees* are larger than those which grow upon Vigorous *Trees*; but then that Largeness, as I may say, is only a swelling, or a kind of Dropsie, which is the Reason that the *Pulp* of those *Fruits*, that are larger than they should be, is generally insipid, or bitter, and disgusting.

*Peaches* that drop of themselves, are contrary to what we have been saying of *Pears*; by reason that *Peaches* which drop thus of themselves, or loosen, are commonly pals'd, and consequently naught, in so much, that they should not be presented as good to any body, tho' not bruist by the fall, as it happens commonly.

But that Rule does not commonly extend to small *Peaches* in their kind, nor especially to early or late Purple *Peaches*, nor to *Pavies*; those kind of *Fruits* which can hardly ever be too ripe, are commonly very good when they drop, inasmuch, that when they drop without being shook, it is a good mark of their Maturity, as well as Goodness.

The same thing may be said of *Plums*, since we always shake *Plum-Trees* in order to get good *Plums*; tho' indeed this Method is more particularly for common *Plums*, than for *Perdrignons*, *Rochecourbons*, and other Principal *Plums*, by reason that one of their Chief Excellencies consisting in the Flowry Beauty of their Complexion, the which excites the Appetite of the most moderate: A fall, or their being finger'd too much, spoils that Flower which should be preserv'd carefully; therefore those that are really Curious, never touch them otherwise than with the extremity of two Fingers.

Let us now return to our early *Peaches*, and say, that the Part which ripens first in them, as well as in all other *Fruits*, *Pears*, *Peaches*, *Plums*, *Apricocks*, *Admons*, &c. is commonly the inward part, I mean, that which is nearest to the Stone, and moreover, that which in relation to them appears first ripe to the eye, is directly contrary to what we have said of *Pears*; for whereas in *Pears* that part which is nearest to the *Stalk* ripens first, in these it is commonly the Extremity which is opposite to the *Stalk*, by reason that that part enjoys the benefit of the Sun sooner, and longer than any other; but when the Beams of the Sun lay upon no part of these early *Peaches*, it seems that the heat which Reigns in the Air, ripens them all over equally.

We begin to judge of their approaching Maturity, when we perceive that they begin to thicken extremely (which we call taking *Pulp*) and when at the same time, their green whitens considerably, and their down begins to fall; but unfortunately for those poor *Fruits*, or rather for Nice Pallats, and such as have Skill; those first appearances of maturity are commonly mistaken for perfect maturity, and so they are gather'd, while they are still as hard as Stones, instead of staying until they are grown Mellow, as they should be; and therefore, excepting a few of the first, which are serv'd pretty unseasonably, most of them pass through the fire, before they appear at Table.

I must not omit saying in this place, that the *Peaches* which do not attain the size their kind requires, commonly drop before their being ripe, and when they seem to ripen,

their

their *Rind* remains downy, their *Pulp* green, their Water bitter, and the Stone Larger than those which have taken more *Pulp*.

Neither must I forget to say, that as a little after the knitting of the *Fruit*, generally a considerable part of it drops, so it often happens that at the time the maturity approaches, a great number of the *Fruits* fall, and that about a Fortnight, or Three Weeks before that maturity, as if the *Tree* was sensible of its being over-burthen'd, and would thereby give us notice that the good time is approaching; and indeed it is commonly observ'd at that time, that a good number of Large *Fruits* drop, whereby those that remain, grow the finer, and the better; and as we have already said, it had been much the better for them, had the Gard'ner taken Care to perform what time has now done.

People are overjoy'd to see those early *Peaches* ripe at the end of *June*, and to enjoy them long, which is not difficult, provided we have several *Trees* of them in different *Exposures*; they are incomparable, when they are well-Condition'd, both as to size, and maturity; but then we are commonly expos'd to the vexation of tarrying until towards the end of *July*, for the *Peaches* that succeed these first, and those we call *Troy-Peaches*; which *Peaches*, provided they be thoroughly ripe, charm every body by the fineness of their *Pulp*, the perfume of their Water, and the deliciousness of their Taste; their maturity is known as in other *Fruits*, First by the size, Secondly by a fine red Colour on that side which is expos'd to the Sun, and a light Transparent Yellow in the other parts: Thirdly, by a thin, soft, mellow *Rind*, somewhat like Satin; any of these marks being wanting, the *Fruit* cannot be ripe, and therefore should not be gather'd.

Those *Troy-Peaches* are often abus'd as well as the early *Peaches*, and all other *Peaches* at the entrance of their maturity; that is, they are gather'd upon the least Symptoms, without staying until they have attain'd that degree of goodness, they never obtain 'till they are thoroughly ripe; and this defect proceeds, either from the ignorance, or liquorishness of the Person, who gathers them out of desire to eat, or else out of a silly avidity of gain, which reigns in the Heart, and Eyes of those who are uneasy until they expose them to sale in the Market.

The Month of *July* affords us many other *Fruits* besides *Troy-Peaches*, but the Month of *August* surpasses it in point of abundance, for it affords us not only an infinity of *Plums*, but also a vast quantity of Kernel-Fruits; among which, are the *Cuisse-Madame*, or *Lady-Thigh*, the *Gros-Blanquet*, the *Sans-Peau*, or without *Rind*, The *Espargne*, or *Sparing*, the *Orange-Pears*, the *Summer-Bon-Cbreiten*, the *Casselets*, the *Robins*, the *Russeting*, &c. the maturity of which is known, either by their dropping, or not resisting when they are gather'd, or else by a certain yellow colour, which appears in the *Rind*, especially near the *Stalk*. Among *Plums* we reckon the *Perdrignons*, the *Mirabelles*, *Imperials*, *St. Catherine*, *Roche-Courbon*, *Queen Claude*, *Apricock-Plums*, &c. To those *Plums* are join'd about the middle of *August* some fine *Peaches*, *Viz.* First, the two *Magdalens*, the white and red, the *Mignonne*, the *Bourdin*, the *Rossane*, &c. all which are large: In the second place, the *Alberges*, both red, and yellow, the *Cherry-Peach*, the one with white *Pulp*, the other with yellow, &c. those *Peaches*, as well as those that are to succeed them, have no other particular marks to discover their maturity, than those I have already mention'd for early, and *Troy-Peaches*, which are a reasonable size, a red and yellowish colour without any mixture of Green, and especially their coming off with ease at the least pull or motion of a Skillful hand; all these *Fruits* are fit to eat as soon as gather'd, and require no *Store-House*, at least to ripen, *Peaches* never ripening off the *Tree*, so that it is in vain to gather them before they are perfectly ripe; but as I have said elsewhere, a day or two's repose in the *Store-House*, far from injuring of them, affords them a certain coolness which is very proper for them, and which they cannot acquire, while they remain upon the *Tree*.

The Month of *September* is famous for a world of the Principal *Peaches*, the *Chevreuse*, *Hasty Violet*, *Perfisque*, *Admirable*, *Powpree*, or *Purple-Peach*, *Bellegarde*, *White d'Andilly*, besides *Brugnons*, and white *Pavies*, &c. There are also some Summer *Calville Apples*, and some good *Pears*, which keep these *Peaches* Company, and may be eaten off the *Tree*, *Viz.* The *Melting-Pear* of *Brest*, brown *Orange-Pears*, &c. At least they will not keep long, the *Pears* grow too mellow, and the *Apples* grow downy; but yet at this time Kernel-Fruit will begin to require a little rest in the *Store-House*, or *Conseratory*, and the best way to judge of their maturity, is to squeeze them gently with the Thumb about the *Stalk*, to try whether they yield, or no.

The Month of *October* is likewise to be valued for the last Admirable *Peaches* it produces in the open Air, or in the *West*, *Viz.* The *Nivret*, and latter *Violets*, besides the Large Red, as well as Yellow *Pavies*, without omitting the fine latter yellow *Peaches*, all growing in good *Expositions*. The *Butter-Pear*, *Verte Longue*, or *Long Green*,

*Doyenné, or Deanery, Lansac, Green Sugar-Pear, Burgamot, Vine-Pears, Messive John, &c.* begin to Signalize themselves at this time, but then they must be kept some time in the *Store-House*; we will speak more particularly of this, in the Treatise of *Store-Houses*; in the mean time, it will not be improper to speak about the means of preserving, and transporting the tender *Fruits* we have mention'd, found, and unbruish'd.

## CHAP. VII.

*Of the Situation that is proper for the Fruits that are gather'd, in order to Preserve them some time.*

IN Order to end what I have begun, I am now only to speak of the means of Preserving, as much as can be, good *Fruits* after their being gather'd, and of the means of transporting them when it is necessary: As to the preservation, I mean such in particular, as are not gather'd until they have attain'd a full maturity, and such as being extream tender and puny, make an end of acquiring it after their being taken out of the *Garden*, both the one and the other losing their Lustre and Beauty to a high degree, by being either bruish'd, rub'd, scratch'd, or spotted with little black Spots; such are your *Figs*, and *Peaches* with their fine Colour, and delicate *Pulp*; such are *Plums* with the fine flower that covers them, and *Butter-Pears* that are perfectly ripe; This has no relation to other *Fruits* that are neither so choice, as *Cherries, Morello's, Bigarreaux, &c.* Nor so easily spoil'd, as *Melons, Pavia's, hard Pears, baking Pears, all Apples, &c.*

I suppose that every *Fig*, every *Peach*, and every *Plum* has been gather'd with all the Caution I have heretofore explain'd, insomuch, that in the taking them off the *Tree*, nothing was wanting to their perfection; I also suppose, that in the gathering of them, care has been taken to lay them in *Sieves*, with tender soft *Leaves*, as *Vine-Leaves, &c.* And to place them all asunder, that they may be no wise squeez'd, nor any laid a top of one another, by reason that the weight of the uppermost would be capable of bruising the undermost, and that particularly for *Peaches*, and *Figs*, for *Plums* are not so heavy as to hurt one another.

Now, in order to preserve those kind of *Fruits* some days, that is, two or three days, especially the *Peaches*; they must be laid either in *Closets*, or *Store-Houses*, which must be very dry, and clean, and full of Shelves, the Windows being always open, unless it be in very Cold weather: Hereafter I will explain the Conditions of a good *Store-House*, or *Conservatory*; you must lay a finger thick of Moss upon those Shelves, which may serve, as it were for a kind of Quilt, taking care that the Moss be very dry, and has no ill scent; the Reason of which is, that every *Peach* so plac'd, sinks of it self into the Moss, and lies softly, without being squeez'd by any of the others. I dare affirm that it is with *Peaches*, as with *Melons*, which are better to eat a day after their being gather'd, and left at a distance from the Sun, than just after their being gather'd, at which time they are lukewarm: Altho' it is not good to touch *Fruit* much, either upon the *Tree*, or in the *Store-House*, yet, provided it be perform'd by a Skillful hand, it will not prejudice it; therefore, while those *Peaches* lay in the *Store-House*, they must be carefully visited once a day, to see whether there appears no marks of rottenness, at the same time removing all such that are in the least tainted, otherwise they would spoil others.

It is necessary to place *Fruits* well in the *Store-House*, those that have not those regards, lose abundance of them by their own fault: the best situation for *Peaches*, is, to be plac'd, not only upon Moss, but upon the part which joyn'd to the *Stalk*, otherwise they are apt to bruile; *Figs* must be laid sidewise, by reason that if they were laid upon the *Eye*, they would lose their best juice; as for *Plums*, whereas they have no great weight they may be laid any how, as well as *Cherries*.

The best situation for *Pears*, their Figure being Pyramidal, is to be plac'd upon the *Eye*, with the *Stalk* upwards; it is indifferent whether *Apples*, the Figure of which forms a perfect Cube, lay upon the *Eye*, or *Stalk*, which is always very thort, both these *Fruits* will preserve themselves well enough upon the bare boards, besides, for a while they may lie upon one another, when first brought out of the *Garden*, until they approach to maturity; but above all, I would not allow them any Bed or Covering of Straw, or Hay, by reason, that commonly it gives them an ill scent.

The best way for *Grapes* is to hang them up in the Air fasten'd to a packthread, or a bout a Hoop, or fix'd to some Beam; besides, they may be laid safe enough upon Straw, and

and when any body desires to preserve them until *February, March, or April*, they must be gather'd before they are perfectly ripe, otherwise they are apt to rot too soon; besides, Care must be taken once in two or three days to pick all the rotten ones carefully.

All manner of *Apples* will last until *March*, and some until *May*, and *June*; for instance, the *Reynettes*, or French *Peppins, Apis, Rose-Apples, Francatis, &c.* Care being taken that the greatest Mark of their maturity commonly consists in being somewhat wrinkled, excepting the *Apples of Api*, and the *Rose-Apples*, which never wrinkle; they are known to be ripe when all the green which appear'd in the *Rind* is turn'd yellow.

The destiny of *Pears*, as to their lasting, is very different, those that last longest, are the *Bon-Chrestiens, St. Lexin, Dry-Martins, Martin-Sires, Baking-Pears, Double-Blossoms*, and some *Franc-reals, &c.* I will speak more at large of them in the Treatise of the *Store-Houses*.

We have set down elsewhere which are commonly the *Pears* of every Month, and therefore it would be useless to repeat it here: Red *Fruits* last but little after their being gather'd, *Strawberries*, and *Raspberries* are seldom good after a day, *Cherries, Morello's, Bigarreaux*, and *Currants* may perhaps last a day longer; good *Fruits* should be serv'd upon the Table in the same situation they are plac'd in the *Store-Houses*, in order to make a pretty show, excepting only *Pears*, which in that Case require some agreeable Cinctury for the Construction of the Pyramids.

With all these Precautions, *Fruits* may be easily preserv'd as long as they can last, nothing can prejudice them, but great Winter Frosts, which are very dangerous, by reason that they may penetrate into the *Store-Houses*, and so reach the *Fruits*, and *Fruit* that has once been Frozen, preserves no manner of goodness, and immediately decays; those that have no *Store-Houses* made on purpose, with all the necessary regards, I shall explain in the sequel, and who have only a Closet, or some ordinary room, are in danger of losing all their *Fruit* in bad Weather, unless they take a great deal of care to cover them well with good Blankets, or place them between two Quilts, or else carry them into some Cellar, until the danger be past, at which time those poor Prisoners are taken out of their Dungeons, to be put at Liberty again in their former Places.

## CHAP. VIII.

*Of the Transportation of Fruits.*

THE Difficulty in question has no relation to any *Pears*, being newly gather'd, nor to any hard Baking *Pears*, tho' ripe, provided, in case they be Winter *Bon-Chretien Pears*, every *Pear* be wrapt up in a piece of Paper; neither has this difficulty any relation to any *Apples* whatever; those kind of *Fruits* tho' laid pell mell in Baskets, or Panniers, will endure the being carry'd, either upon a Horse, or in a Cart; but we cannot do so with tender mellow *Pears* when they are ripe; in that case they are like the *Figs*, and *Peaches, &c.* their delicacy and tenderness requires a gentle usage, like Beautiful young Ladies, otherwise the agitation of the Carriage would bruise and blacken them, and consequently would deprive them of their greatest Ornaments, and even of their chief goodness.

This Prelude conducts us insensibly to establish, that *Peaches, Figs, Strawberries, Morello's, &c.* in order to their being transported from one place to another, require Water-Carriage, or the Back or Arms of a Porter without any joggling, and above all, if they be *Peaches*, they must be laid upon that part which is fix'd to the *Stalk*, without touching one another, and be laid first upon a Bed of Moss, or tender *Leaves* laid pretty thick; and in the second place, wrapt up in *Vine-Leaves*, and so well order'd, that they may not move out of their places; and finally, in case several Beds be laid over one another, a good separation must be made between them of Moss, or of a reasonable quantity of *Leaves*, the last Couch must likewise be pretty well cover'd with *Leaves*, and the whole wrapt up with a Cloth, well fasten'd, in order to keep all that is contain'd in the Basket close, and in good order: The safest way would be to do with *Peaches*, what I am going to prescribe for *Figs*, but then the inconvenience is, that it would be impossible to carry any considerable quantity at a time. For *Figs* you must have *Sives* not above two inches deep, and lay a bed of *Vine-Leaves* at the bottom of them, and place the *Figs* sidewise, wrapping them up first, asunder, each in one of the said *Leaves*, taking care to order them so well, and so neatly

neatly close to one another, that the motion of the transportation may not be able to remove them, and never lay two a top of one another: This first and only Bed being made, it must be cover'd with Leaves, and next with a Sheet of Paper, neatly fix'd round about the Sive, and moreover stay'd with some small Packthread, in order to keep the *Fruit* close into the said Sive.

Good *Plums* being laid up, without any Ceremony, in any Basket, or Sive, with a good Bed of *Leaves* or *Nettles* at the bottom of it; the top must also be cover'd with *Nettles*, after having first taken off the thickest down, which being done, the whole must be Cover'd with a Linen Cloth, or some Sheets of Paper, fasten'd with some Packthread:

Common *Plums* may be transported in great Baskets, barely putting small *Leaves* under, and over them.

*Apricock-Plums* are sent from *Tours* to *Paris* upon Messengers Horses, with a great deal more precaution apart, for they are put in Boxes stuff'd with Houads; every one of them being moreover separately wrapt up in Houads; but that Expedient is Chargeable, besides it is impossible to carry many at a time.

*Strawberries* being likewise order'd in double ridges, in Baskets made on purpose, stuff'd with *leaves* at the bottom, and round about; it will suffice to cover them with a fine Wet Piece of Linnen, abundance of them are carry'd thus, according to the bigness of those Baskets.

*Grapes*, either *Muscat* or *Chasselas*, are partly carry'd in the same manner I have noted for *Peaches*; nay with less Ceremony, since it is not very material to separate every Bed with *Leaves*.

*Muscat Grapes*, are sometimes sent into distant Countrys, and they are put in Cases fill'd with Bran, and carry'd upon Horses or Mules, care being taken that the *Bunches* may not touch one another; But that is an Expence only proper for Kings, or very great Lords.

For the Transportation of our Principal *Fruits*, when they are only to be sent a Days Journey at most, I commonly use certain square Baskets, divided in the Inside into several Stories, which are at a convenient distance from one another, to place our Sives full of *Fruit*; those are either made of very Close Ozier, and then they need no other covering to secure them from Dust, or else of loose Ozier, and then they must be cover'd with Sere-Cloath; moreover, those Baskets open sidewise like a kind of Press, or else at the top, and then the lowest Story must be fill'd first, and a little covering laid over it which serves to close this first, and to bear the Second, and thus to the uppermost; a small Pad-lock may be fix'd to it, at pleasure, to which two Keys may be made, the one for those to whom the *Fruit* is sent, and the other remaining with the Person who sends it, by which means the *Fruit* is convey'd safely.

## CHAP. IX.

### Of Store-Houses, or Conservatories for Fruits.

IF in that very season, when *Kitchen-Gardens* Charm most by their *Greenness*, and neatness, *Fruits* are notwithstanding their chief Ornament, what advantages, or rather what Consolations are not those *Fruits* capable of affording us, when in the middle of a dismal, Melancholy Winter, we are provided with a Considerable store of them, and even some of them Infinitely better than any the Summer had supplied us with. There is no denying that we are all naturally inclin'd to have a Violent Passion for *Fruits*, and by that are very reason, as they are delicious to the Palate, we easily persuade our selves that they are of use for our Health; Physicians who are to give no Rules against Infirmities, are so far from opposing this Opinion, that they Establish it as Infalible, and often prescribe the use of *Fruits* as Sovereign Remedies; for which reason most People are at present Curious of *Fruits*, and many Gentlemen are proud of expressing their Earnestness in Rearing them: Nature seems to delight in favouring that Curiosity, it yearly produces abundance of *Fruits*; the Summer produces but too many, and Autumn yields a sufficient quantity; but the difficulty is to have some in the Winter, which is a Dead, Infertile Season; therefore we should make it our study to preserve such, as are only good a considerable while after their being gather'd; they are Exposed to a long Journey, in which they are to run many hazards: It does not only require a careful man, but also a Place that may be altogether proper to preserve them

them; we must on one side Combat Cold which destroys all those it reaches, on the other hand we must prevent all ill scents, which would spoil what the Weather had spar'd: This Place is commonly call'd a *Store-House* or *Conservatory*, which without doubt must have its Rules, and particular properties, since it is so useful, and is to produce such good Effects. It is to be suppos'd that I must needs be skill'd, in that Point, considering the Great and Ancient use I have made of it in *Gardens*; and Consequently I should certainly be blam'd, unless I declar'd what my Experience has taught me in relation to *Store-Houses*, either to avoid the defects that are to be fear'd in it, or to attain the success that is to be hop'd for.

Let other Curioso's, which are in so great a Number, cry up their Closets as much as they please, let them Invite every body to come and see them, let them be careful in making rich Descriptions of them, I am so far from finding fault at it, that I am one of the first to Commend them, I Visit them with a singular satisfaction, and take great delight in looking upon such things as are most Extraordinary, not only for the matter, but likewise for the Workmanship; I say, let People cry up those Collections of Miracles of Art, but at least let them allow those that are Curious in Gard'ning, the liberty of boasting of their *Store-Houses* of *Fruits*, which are their Closets; not that they contain any Originals, or Antiquities, far from it, their greatest Value consists altogether in Novelty, but then they are excellent Novelties; that is, they are productions of Nature, which renew, and take new Vigour Yearly: Productions which indeed are only, if I may use the Expression, so many Copies of its first Productions at the Birth of Time, which at the same time surpasses the Merit of those Originals: By reason that this Nature having been Charm'd at first, with the Beauty of its first Effluys, has taken delight in repeating them as often as it could, as if it really Study'd more and more to improve, even to that degree, that it suffers itself to be Conducted a little by *Culture*, seeing that *Culture* really contributes to the Perfectioning of its new Productions.

This being granted, I am of Opinion, that no Body will deny that this Closet deserves to be seen, and in truth nothing can be more agreeable to sight than this *Store-House*, where at the first Entrance you discover a kind of well contriv'd Room, of which the size is proportion'd to the Occasion for which it was Built, where you discover in the next Place, a fine Edg'd Table, which takes up the middle of the Place, and is convenient and necessary to order the Baskets, or *China-Balons* that are to be serv'd, where finally you discover the four Walls Garnish'd, and see all the Shelves well Order'd, and fill'd both in Autumn and Winter with fine *Fruits*; those *Fruits* differently plac'd with flying Labels, to express their kinds, and Maturity in relation to the Sequel of Months; thus *Burgamots* are order'd in one Place, *Virgoules* in another, *Ambrets* here, *Thorn-Pears* there, *Leichsellers* here, the *St. Germans* there, *Bonchretien* here, *Bngy* there, *Baking Pears* here, there the *Apples*, with the same Distinctions observ'd for the *Pears*; here *Fruits* that drop of themselves, there such as have been gather'd in Season, here those of the North, there those of good *Espaliers*; here those of *High-Standards*, there those of *Dwarfs*, there the *Fruits* that are Ripe in such a Month, there those that do not Ripen so soon, &c. with this Constant order, that those that are Ripe are always most within reach, both for the Hand and Eye, and those that are not Ripe yet, according to their Degree, plac'd upon higher Shelves, where they expect the Season that is to ripen them, and consequently to be remov'd in the Room of those that are Pass'd; those first Disappear after having perform'd their Part, and finish'd their Career; and others are ready to Succeed them, and as it were, to come each to their turn to serve the quarter which is design'd for them.

Finally, do's not the Liberality of our Curioso towards his Friends (for he loves to impart what he has) deserve some privilege to raise the Merit of his Closet above others, out of which we only bring bare Ideas, and were far from receiving any Liberality, on the contrary the Curioso makes profession of being close Filled; he never makes a show of his Treasure unless it be against his Will; there constantly appears a great deal of diffult in him, which sometimes proceeds from the fear of being Robb'd, but more commonly out of fear of not being thought as Rich, as he pretends to be.

Let us now Proceed to Establish the principal Conditions of a good *Store-House*; In my Opinion the first consists in its being impenetrable to Frosts; great Cold as we have already often declar'd being a mortal Enemy to *Fruits*, those that are once Frozen, are never after good for any thing.

It follows from thence, for the Second Condition, that this *Store-House* must be expos'd to the *South or East*, or at least to the *West*; the *Northern* Exposition would be very pernicious to it.

It also follows for the Third Condition, that the Wall of the said *Store-House* must be at least Twenty Four Inches thick, or else the Frost could not be kept out.

It likewise follows for the Fourth Condition, that the Windows besides the Common Quarrels, should have good double Paper Sashes, Very close, and very well stop'd, together with a Double Door, inasmuch that the Cold Air from abroad, may not be able to enter in, for it would certainly destroy the Temperate Air which has been preserv'd of Old in the Inside, it is impossible to be too exact in this care, since the least or any, might occasion a great deal of disorder in one Frosty Night; I do not in the least approve the making of Fire in the *Store-House*, for the same reason, I have sufficiently Establish'd in the Treatise of *Orange-Trees*.

Notwithstanding all these Conditions, which perhaps have not been exactly Observ'd the thing being pritty difficult, it is absolutely necessary to have some small Vessel full of Water in the *Store-House*, to be certain, It is a faithful Incorruptible Centry, which is to give us notice of all that may Prejudice us; when that Water does not Freeze there is nothing to be done; but when it Freezes in the least, a remedy must immediately be apply'd: The Colds of the Month of *December* 1670, 1675, 1676, 1678, that of *January*, and *February*, 1679, and especially that of *December* 1683, and of *January* 1684, which lasted a whole Month, without discontinuation the last time, must needs serve for a great Instruction in this Matter; it required a great deal of Care, and foresight, not to be caught by it. A good Weather-Glass plac'd on the out-side at the *Northern-Exposure* is of great use; we have reason to Judge the Peril great, when this Weather-Glass continues for two Nights together to be, at the fifth and sixth Degrees, and even the seventh and eighth; the first Night may have done no harm, the second is much to be fear'd, and therefore it is very necessary the very next Day after such a Night to use good Quilts, or good Blankets, or else a great deal of dry Moss to secure our *Fruits* from Frost; nay more, having a good Cellar, it will be very proper to remove our *Fruits* into it, and leave them there until the great Cold be pass'd, and in all these Cases care must be taken to replace all those *Fruits* as they were before in the *Store-House*; as soon as the Weather grows better, and to remove such as are Ripe, and such as are tainted, Rottness is one of the worst accidents to be fear'd, while *Fruits* are not in a Condition to be Visited often one after another.

After having made Provision against Cold, we must Study to preserve our *Fruits* from ill Taste; the Neighbourhood of Hay, Straw, Dung, Cheese, a great deal of Foul Linnen, especially such as has been employ'd in the Kitchen, &c. are all very dangerous, and must not in the least be suffer'd near our *Store-House* or *Conseratory*; a certain Musty Taste, together with the smell of many *Fruits* laid up together is likewise very disagreeable, and therefore the *Store-House* must not only have good Overtures, and a high Ceiling, the just measure of which, is to be from Ten to Twelve Foot high, but the Windows must often be kept open, that is, as often as there is no fear of great Cold either in the Night, or in the Day, fresh Air from without, when it is Temperate, is Incomparable to purity, and reestablish, that which has been long inclos'd.

For the Sixth Condition, I think I may say, that neither a Cellar nor a Garret are fit to make this *Conseratory*, the Cellar by reason of a mustiness, and moist heat that are inseparable from it, which inclines the *Fruit* to Rottness; the Garret because of the Cold, which easily Penetrates the Roof; and therefore a ground Room is the best for our Use, or at least a first Story, accompany'd with other Lodging-Rooms Inhabited over and under it, as well as on the sides.

I add to this Sixth Condition, that the *Store-House* must be often visited by him that has it in Charge, which is neglected when he is not at Hand, that is, conveniently plac'd, by reason of the trouble of going too much up, or down.

The seventh Condition requires, many shelves fram'd together in order to Lodge the *Fruits* separately the one from the other, the finest on the best side, and Baking-Pears on the worst; *Apples* must lye by themselves. The reasonable distance of these Shelves is to be about Nine or Ten Inches; and I would have them about Seventeen or Eighteen Inches broad, that they may hold the more, and please the sight the better.

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For the Eighth Condition, I would have those shelves a little sloping outwardly, that is, about an Inch in the Breadth, with an Edge about Two Fingers high, to hinder the *Fruit* from Falling: The *Fruits* are not so much in sight when the Shelves are level, as when they are as I desire them, and thus when any of them are Rotten it is not so easily perceiv'd, and that Rottness Communicates it self to those that are about it, unless remedy'd at first.

The fear of that Rottness requires for a Ninth Condition, that every Shelf should be visited at least every other day, without fail, to remove what ever may be tainted:

And for the Tenth Condition, it requires that the Shelves should be cover'd with something, for Instance dry Moss, or about an Inch thick of fine Sand, in order to keep every *Fruit* steady, after its being plac'd upon its Basis, as it should be, and to keep it asunder, for the *Fruits* must no wife be allow'd to touch each other: It is much pleasanter to see them all in a row upon their Basis, that is, upon the Eye which is opposite to the *Stalk*, than to see them Lye pell mell any how.

I require for the Last Condition, that Care be taken to Sweep our *Conseratory*, or *Store-House* often, to suffer no Cobwebs in it, and to keep Traps for Rats and Mice; and moreover it will not be amiss to allow it some secret Entrance for Cats, otherwise the *Fruit* will be in danger of being gnaw'd by those Curs'd little Domestick Animals.

The *Conseratory*, which is particularly design'd for *Winter-Fruits*, is likewise very useful for those of *Autumn*, either *Pears* or *Grapes*, or for *Summer Fruits*, either *Peaches*, *Pawies*, *Plums*, &c. Those being in my opinion, as I have already said, much better a day after their being gather'd, than the very day; they acquire a certain coolness in the *Store-House*, which is a great Improvement which they can never have, while they are upon the Tree.

Now whereas generally speaking, the *Fruits* that are most Considerable, are only brought into the *Store-House*, after their having acquir'd one of the two Maturities, which is proper for them, viz. for the *Summer Fruits* an approaching Maturity, which Expediates them in few days, and for *Autumn*, and *Winter-Fruits*, a distant Maturity, which makes them keep long, some less, some more; and besides, whereas it is the approaching Maturity, which is of most Consequence, as well for those good *Fruits*, which would perish miserably, unless taken in the nick, as for the Master whose pains, cares, and hopes would be lost, unless he were capable, as the saying is, to nick the Critical Minute; it follows from thence, that it is necessary to make an end of giving, in this place, the Infallible marks by which this Maturity is to be known: I have already explain'd those marks for most *Fruits* which do not exceed *September* and *October*, viz. for the remainder of *Summer Pears*, the remainder of *Plums*, the best latter *Peaches* and *Pawies*, &c. There now remains to speak of *October Pears*, and others, which keep from *All-Saints*, till *Easter*, and longer.

The *Verdelongue* or *Long-Green*, *Butter-Pears*, *Vine-Pears*, *Messire-Johns*, *Green-Sugar-Pears*, &c. after these, the *Petit-oins*, *Lanfaes*, *Marchionesses*, *Burgamais*, *Amadottes*, and even the *Besideri*, and *Thick-Stalks*, &c. are the first, that are to pass during the Month of *November*; the *Thumb* (as we have observ'd already, for the *Butter-Pears*, *Long-Greens*, *Green-Sugar-Pears*, and others, which have began to ripen in *October*) daily turns whatever ripens out of the *Store-House*, viz. *Petit-oins*, *Marchionesses*, *Rosettes*, *Lanfaes* &c. by reason that these are still tender *Pears*; a Whitish Colour which forms it self in the Rind of the *Messire-Johns*, a Yellow cast in the *Amadottes*, *Thick-Stalks*, *Besideri*, &c. and a moisture upon the Rind of the *Burgamais*, together with a little Yellowness which discovers it self upon them, all those are certain signs which inform us without the help of the *Thumb*, of what we have a mind to know of those left kinds of *Fruits*, 'tis but examining of them Constantly, or at least every other day, and that Rule of review for the Maturity is to be continu'd the following Months for all other *Fruits*, that remain, in order not to lose the least sign which discovers their approaching Maturity; moreover this review is necessary, to remove such as begin to Rot.

The *Louise-bonne*, *Winter-Thorns*, *Ambrets*, *Leschafries*, *St. Germain's*, *Pengoules*, even the *Dry-Marrins*, *Spanish Ben-Cherrens*, with the *Apples* of all kinds, of *Capends*, either Grey, or Red, or White, the *Apples* of *Renoulets*, *Autumn Cabulis*, some *Apis*, and some *Reynettes*, &c. all these *Fruits* begin to ripen at the beginning of *December*, and a little Yellowness, together with some Wrinkles discovers it self upon the six first, by which

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we may judge, in case that they do not resist the *Thumb*, that they are fit to Eat, but until then, we must not venture to meddle with them; in cutting of them, the Knife would soon discover their want of Ripeness; those kind of *Pears* are very Subject to soften, and thereby are certainly apt to deceive those who do not strictly Examine them every day.

As to the *Dry-Martins*, and *Spanish Bon-Chrétiens*, it is with them in the Month of December, just as what I am going to say in *January* for the *Portail-Pears*, as soon as ever there appears the least Spot of Rottenness upon any of them, you may boldly attack them all, their time is come, and they are soon threaten'd with Rottenness; but yet with this advantage, that they remain a pretty while in the State of perfect Maturity.

The *Capendu*, *Fenouillet*, and *Reinettes*, declare their Maturity as soon as they become extremely wrinkled, the *Apis* declare theirs when their Green Colour turns to Yellow.

The *Calvils* seem to become lighter, and their kernel loosens, and rattles in shaking; when they ripen, they remain good a long while, as well as the *Reinettes*, which are become Yellow, without wrinkling, and those are admirable qualifications in those kind of Fruits.

People must not grow weary of often feeling the tender melting *Pears* of that Season, the lazy and negligent thereby fall into great Inconveniences.

Such Fruits as have resisted the *Thumb* in the Month of December, will finally yield to it in their turns in the Months of *January* and *February*, but when the *Winter-Thorns*, are not able to change their Colour a little in these Months, they become Mealy and Insipid, and in a Word, perish without attaining a perfect Maturity, which is a cruel loss to the Curious, since it is really one of our best *Pears*.

I have made very considerable Observations in relation to it, and of some others, in the Treatise of the Choice and Proportion, &c.

The *Louis-bonne*, and the *Long-Greens*, of September and October, seldom grow Yellow, but they wrinkle, and become soft, mellow, and agreeable to feel.

Many *Ambres* soften, before they grow Yellow, particularly such as grow North-ward, or upon Dwarf-Standards, and especially upon Trees Grafted upon free Stocks, that are too full, therefore these, as well as all other *Pears* which grow upon Northern *Espaliers*, require Sugar above all others, to correct their Taste, which is not so good as it should be, tho they are so very full of Water.

The large *Winter-Musky*, and the *Portail-Pears* have some Friends, neither of them Value the skill of the *Thumb*, but the Yellowness of the first, and a few wrinkles, or some Rottenness in the second, to Invite their Votaries do make use of their merit, what ever it be.

One of the chief things I mind in ordering my Fruits in the Store-House or Conservatory, is not only to place every kind upon different Shelves, or when I do put several upon one, they are distinguish'd by divisions of Edges, but I likewise make the same distinction among Fruits of the same kind; first I place those that are fallen before their time (for I do not fling them away) by themselves, out of sight, they seldom look well, by reason of their growing very much wrinkled, indeed some more, and others less, and that according to their dropping, sooner, or later; but yet they ripen at last, tho pretty long after the others of their kind; and I cannot forbear doing of them the Justice to say, that they are pretty often incomparably good under a wither'd, ugly, wrinkled Rind, especially when their fall does not exceed a Month before the time of the common gathering.

Secondly, *Pears* growing upon Dwarf-Standards are apart, as well as those of good *Espaliers* or *Walk-Trees*.

I follow the same Method for the Fruits of *High-Standards*, and the same for the Fruits of *Northern Espaliers*, by reason that regularly the Fruits of good *Espaliers* ripen first; those of Vigorous *Dwarfs* follow them in this order, those of *Dwarfs* Grafted upon *Quince-Stocks* precede those that are Grafted upon *Free-Stocks*, and those of Inferior Trees precede both the one and the other.

In fine, the Fruits of *High-Standards* succeed, and often mix with these, and are the best of all, which Maxim is Universally true, Excepting only *Plums*, and *Apples*, as I have said elsewhere; the Fruits of the *Northern Exposure*, ripen last of all.

*Winter Bon Chrétiens*, with their Brittle Pulp, and the *Colmars* with their tender Pulp, let all other Mellow *Pears* pass before them, and in the mean time the others begin to turn

turn yellow, and in turning yellow, to Ripen, and to wrinkle a little towards the Stalk: When *Bon-Chretien* is perfectly ripe, the Pulp is almost melting, and when it is not, it remains very stony; some of them will keep till *March*, and *April*; the *Bugs's*, *St. Lezins*, and *Martin-Sires* joyn with those, to close up the Theatre of the Maturity of *Pears*; the *Bugs* in *March* and *April* are very delicious, with their tender watery Pulp, tho' a little Sowrish: The *St. Lezins* with their firm Pulp, accompany'd with a little Perfume, also make some Figure, but it is very difficult to preserve them 'till then, the least touch of Cold blackens them intirely, and renders them hideous to sight, as well as disagreeable to the Palate.

As for the Baking-Pears, they are good at all times, for the end they are design'd for, particularly when they begin to grow yellow; with this Proviso, that all such as are tainted with Rottenness, must be laid aside, lest they should infect those that are sound; and thus the *Franc-Real*, *Little Cerceau*, the *Carmelites*, or *Mazzer*, and especially the *Double-Blossoms*, which must be consider'd as the best of those that are only fit to bake, are almost ready at all times to perform their part: The *Pears of Book and Love*, the *Angobers*, *Carillac*, *Fonsarabie*, &c. may chance to acquire some goodness, being season'd with Sugar, and the heat of the Fire, but they still retain a touch of Tartness, which can never agree with nice Pallats.

*Autumn Calvils*, and *Reinets*, are admirable for Preserving, the *Capendus* and *Fenouillers* are not so good, by reason of their sweetness, but the first have a kind of briskness, which gives them an incomparable taste.

## CHAP. X.

### Of the Diseases of Fruit-Trees.

IT is apparent, that by a Law Universally Establish'd, all Living Animated Beings are subject to some Accidents, which hinder them from enjoying a perpetual, and always equally Vigorous health; this is the reason that it is not only among Men, and other Animals, we find different Distempers; Vegetables, and more particularly Fruit-Trees, are likewise subject to certain Infirmities that destroy them, which we may very well term Distempers; yellow Leaves out of Season, new Shoots growing black, and dying on their Extremities in the Months of *August*, and *September*, Fruits remaining small, or dropping of themselves, &c. are, as the Physicians term it, so many speaking Symptoms, informing us of the indisposition of the Foot. Among those Infirmities, there are some that may be Cur'd with the assistance of some Remedies, and others which hitherto appear Incurable; since whatever can be done to them, has still prov'd Ineffectual, perhaps time may produce some Skillful Person, whose Knowledge and Experience may give us some light, in a Case which exposes us to scorn, or at least to pity. In the mean time, since it is but too true that our Trees are liable to different Distempers, Gard'ners would certainly be blame-worthy, if they did not make it their Study to find out effectual Remedies for some, and to satiate themselves as to the others; and if knowing those Remedies, they were not careful to apply them upon occasion: For it were vain for them to breed Trees in their Gardens, to be liable to see them perish in their prime, for want of knowing how to Cure them, and restore them to their pristine Vigour.

In Order not to omit any thing relating to those Accidents which our Trees are liable to, without including such as proceed from too long wounds, of great Heat, of great Cold, of Storms, of Whirlwinds, Hails, &c.

I think my self oblig'd to say, in the first place, that there are Distempers common to all Trees in general; Secondly, that there are some that are peculiar to every particular kind: The common Distempers consist either in a defect of Vigour, which makes the Trees appear in a languishing Condition, or else in a storm of large white Worms, which are sometimes form'd in the Earth, and there gnaw the Roots, or the Bark of the Neighbouring Stem; those mischievous little Insects which we call *Tons*, by degrees cause so great a disorder, that the Tree which is attack'd by them, and had always appear'd Vigorous before, all on a sudden dies without any Remedy.

The Peculiar Distempers are, for Example, in *Pear-Trees* against a Wall, when their *Leaves* are attack'd with what we call *Tigers*: Cankers, and Scabs in other *Pear-Trees*, *Viz. Robins*, small *Muscadins*, &c. Gum on *Stone-Fruit-Trees*, especially *Peach-Trees*, which commonly destroys that part on which it fixes, either *Branch*, or *Stem*; and when, unfortunately it attacks the part where the *Tree* is grafted, which is often hid under ground, it insensibly spreads round about that *Graft*, without any bodies observing of it, for the *Tree* still continues in a good Condition, while there remains any passage for the *Sap*; but, finally, this Gum hindering this *Sap* from rising to the upper parts of the *Tree*, makes that *Tree* die suddenly, as if it had been suffocated by a kind of Apopleckick Fit.

Moreover, some *Peach-Trees* are also attack'd with *Æmets*, and a small kind of green Fleas, which sometimes fasten on the young *Shoots*, and hinder them from thriving; sometimes on the new *Leaves*, and cause them first to shrink, next to dry, and fall: We have likewise *North-East* Winds which blast, in some Springs wither, and as it were burn all the new *Shoots*; inasmuch, that the *Trees* on which this unlucky Influence lights, appears dead, while others about them are green, full of fine *Leaves*, and continue to produce fine *Shoots*: Besides this, are not the most Vigorous *Trees* subject to have the end of their new *Shoots* intirely cut off by a little black round Insect, call'd Bud-Cutter.

*Fig-Trees* dread the great Colds of the Winter, which are capable of Freezing their whole head, unless they be extremely well Cover'd, but it is not sufficient to have secur'd them against Frost.

They are likewise subject in that Winter Season, to have the lower part of their *Stems* gnaw'd by *Rats*, and \* *Mulots* which makes them pine, and die.

Those very Animals, together with \* *Laives*, Ear-wigs, and Snails, likewise spoil the very *Fruit* on the *Trees* when they approach to maturity, especially *Peaches*, and *Plums*; have not *Gosberry-Shrubs* their peculiar Enemies also, which are a kind of small green Caterpillars, which form themselves towards the Months of *May*, and *June*, on the back part of their *Leaves*, and eat them to that degree, that those little *Shrubs* remain altogether bare; and their *Fruit* no longer having any thing to cover and defend them from the great heats of the Sun, is destroy'd, without being able to Ripen.

I might run over all the Accidents which all the rest of *Gard'ning* is liable to, and cause abundance of Disorders in it: For Example, *Strawberry-Plants* in the prime of their Youth and Vigour, are as it were treacherously attack'd in their very *Roots* by those wicked \* *Tons* which destroy them.

*Kitchen-Plants*, especially *Lettuce*, and *Succory*, &c. constantly have some of those \* *Tons*, or other little reddish Worms which gnaw them about the neck, and kill them just as they come to perfection.

How much do *Artichokes* suffer by little black Flies which infest them towards the end of Summer, and *Mulots*, or *Garden-Mice*, which gnaw their *Roots* in the Winter.

*Lettuce*, and *Succory* are absolutely devour'd by Snails, some of which are long, and yellow, some blackish, and gray, and others little and white, especially in Rainy Weather.

*Sorrell* is tormented in very hot weather with little Black Fleas, which gnaw all the *Leaves*, inasmuch that it becomes of no use.

Even *Cabbages* are spoil'd by green Snails, which gnaw and spoil all their *Leaves*; but I am only to speak in this place, of those Distempers that may be Cur'd in *Fruit-Trees*, and not of such as are Incurable, nor of those that are incident to *Kitchen-Plants*; those commonly proceed, either from the defect of the Ground, which does not furnish nourishment enough, or from an ill Culture, or a defect in *Pruning*, or finally, from a defect in the *Tree*, which was not well-condition'd, either before it was Planted, or in Planting of it.

It therefore follows, in the first place, that the *Soil* may contribute to Distemper our *Trees*, which commonly happens when the *Earth* is not Fruitful in it self, or is perhaps become to by being exhausted, or when it is too dry, or too moist; or else when, tho' never to good, there is not a sufficient quantity of it.

In order to remedy all those kind of Inconveniences, I say, that when the *Soil* is infertile, as it happens in many places, where there is nothing but clear Sand, the Master is to blame to have Planted any thing in it, the defect of it can never be Corrected, whatever quantity of Dung he puts into it; the only Expedient is to remove that *Earth*, and put better *Mould* in the room of it: Happy are those who can meet with it in their Neighbourhood, and thereby avoid the Trouble and Charge of fetching it at a distance. As to that which is worn out, it is likely that there may be some better a-

bout

bout it which may be us'd, unless People would allow it two or three years time to lie *Fallow*, in order to amend it by rest, but there is no pleasure in losing so much time: When we resolve to make this Exchange of *Mould*, and yet are unwilling to remove the *Tree* which is not Old, one half of the *Roots* must be *Prun'd* short again, which will suffice for the first Year, doing the same again at the end of two years, to the other half of the *Tree*: Nothing Exhausts the Ground more than the *Roots* of *Trees* lying long in the same place, especially the *Roots* of Neighbouring *Trees*, particularly *Pallidado's* of *Elms*; *Fruit-Trees* must of necessity Pine, or Perish, if that Neighbourhood subsists.

When the Ground is too dry, and light, the best Remedy is to soak it often with frequent Waterings, or by Artificial falls of Water, or else by ordering Spouts, or, Drains in such a manner, that they may Conduct the Water of Rains into the Squares and Bordures, as I have explain'd it in the *Treatise* about Soils.

When the Ground is too moist, that part must be rais'd where the *Trees* stand, making lower Ridges to receive the Waters, and Conduct them out of the *Gardens* by *Gutters*, or *Aqueducts*, as I have done in the *Kitchen-Garden* of *Versailles*.

When there is not *Mold* enough, it must be augmented, either about the *Roots*, removing all the ill *Mould*, to put better in the room of it; or else laying new *Mould* over the Surface of it; the *Mould* being thus amended, without doubt the *Trees* will thrive better in it, and grow more Vigorous.

When the distemper is only visible by a certain yellowness, as for Example; *Pear-Trees* Grafted upon *Quince-Stocks*, in certain Grounds, always grow yellow, tho' the Ground seems to be pretty good; it is a good and certain AdVERTISEMENT to remove them, and to place others in their room upon *Free-Stocks*, which are much more Vigorous, and agree better in an indifferent *Soil*, than others.

When *Peaches* Grafted upon *Almond-Stocks*, cast too much Gum in moist Grounds; others must be Planted upon *Plum-Stocks*, and when they do not thrive upon *Plum-Stocks* in Sandy Grounds, only such must be Planted there, as are Grafted upon *Almonds*.

If, on the other hand, the *Tree* appears over-burthen'd with *Branches*, so as only to shoot very small ones, it must be eas'd, until it begins again to produce fine *Shoots*, always performing that *Pruning*, by lowering the uppermost *Branches*, or by removing part of those that cause a Confusion in the middle, observing the Maxims I have establish'd for good *Pruning*.

When the Distemper proceeds from the *Trees* being ill-Condition'd before its being Planted; as for instance, from its having a Scabby poor Foot, half dead for want, or from its being too weak, the best way is to pull it out, and place a better in the room of it.

If the *Tree*, being good in it self, has been Planted too deep, or too shallow, or with too many *Roots*, the best expedient is to take it up again, *Prune* the *Roots* a-new, and Re-plant it according to the Rules of Art.

And to all these Ends, it is very necessary to keep always some Dozens of good *Trees* in Baskets, to place new ones ready grown in the room of such as must be remov'd.

When the *Trees* are attack'd with some Cankers, you must with the point of a Knife remove the part so tainted to the quick, and then apply a little Cow-Dung to it, covering it with a piece of Linen, a kind of *Rind* will grow over it, which will cover the Wound, and so that Accident will be Cur'd.

When Caterpillars annoy a *Tree*, Care must be taken to remove them.

When *Rats* gnaw the Barks, Snakes and Traps must be laid for them.

When the Distemper is suppos'd to proceed from *Tons*, the Foot of the *Tree* must be un-cover'd to Exterminate them absolutely, putting new *Mould* in the room of the old, after having shortned the *Roots* that are gnaw'd.

Among the Incurable Distempers of our *Trees*, I reckon first Old Age; when for Instance, a *Pear-Tree*, or *Plum-Tree* has serv'd for Thirty, Forty, or Fifty years, we may conclude that it has attain'd a decrepit Age, and consequently, that it has perform'd its part, and is out of date, there is no hopes of a return, it must be taken out, not leaving any of its *Roots* into the Ground, putting new *Mould* into the room of it, in order to Plant new *Trees* there, when People are delirious of seeing *Trees* in the same Place.

In the second place, I reckon the *Tigers* which tick to the back of the *Leaves* of *Wall-Pear-Trees*, and dry them up by sucking all the green Matter that was in them, among the Incurable Distempers; I have employ'd all manner of strong, fower, corrosive, stinking Lees, *Viz.* of Rue, Tobacco, Salt, Vinegar, &c. to wash the *Leaves*, and *Branches*: I have, by the Advice of some of the Curious, employ'd Oyl; I have smok'd them with

Brimstone

\* Lifete.

\*Garden-Mice.  
\*Weasels.

\* Those usu-  
ally called by  
the Name of  
Cock-Chafers.

Brimstone by the Advice of others; I have burnt the Old *Leaves*, I have Scrap'd the back of the *Branches*, and *Stem*, to which the Seed sticks: I daily endeavour to find out some new Expedient; and after all, I confess freely, and to my shame, that I have never succeeded in any of them; there still remains some of the Seed of that Curled Insect, in some part or other: And in the Months of *May*, and *June*, this Seed is hatch'd by the heat of the Sun, and then multiplies *ad Infinitum*, and therefore one of these two things must be done; either no *Pear-Trees* must be suffer'd against a Wall, or in *Elpalier*, which is a violent Remedy, especially for small *Muscat-Pears*, *Burgamoss*, and Winter *Bon-Chretiens*, which seldom thrive from a Wall; or else we must resolve to see those *Tigers* upon them, contenting our selves with burning all the *Leaves* yearly, and with cleaning the *Trees* as much as is possible.

Thirdly, I reckon among the Incurable Distempers the Gum, which fastens to *Peach-Trees*, and other *Stone-Fruits*; when it only appears on one *Branch*, it is no great matter, 'tis but cutting the said *Branch* two or three inches below the part so Distemper'd; whereby this kind of Gangreen is hinder'd from extending farther, as it would infallibly do, if it stuck about the *Graff*, or all over the *Stem*, or on most of the *Roots*, and then the sole Expedient is to lose no more time about it, and consequently to remove such a *Tree* out of the Ground, in the manner aforesaid.

The Gum sometimes proceeds from an external Accident, for instance, from a Wound which has been made by way of Incision, by a Scratch, and sometimes from an Evil inward disposition: In the first Case, that Gum is nothing but a spured *Sap*, which is subject to Corruption, and Rottiness, from the time it ceases to be inclos'd in its Ordinary Channels, which lye between the Wood, and the *Bark*; in that Case the Remedy is easie, especially when it happens only on a *Branch*, as I have declar'd in the preceding Article, when the Distemper affects the *Stem*, it often Cures it self by a knob, or a Continuation of new *Bark*, which extends over the part so Wounded; sometimes it is necessary to apply a Plaster of Cow-dung over it, cover'd with a piece of Linen, until the Wound be clos'd: When the Gum proceeds from the inside, I judge it Incurable on the *Stem*, or *Roots*.

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T R E A T I S E  
OF THE  
Graffs of Trees,  
AND OF  
N U R S E R I E S.

## C H A P. XI.

## Of Graffs.

I Never Reflect on what we call *Graffing of Trees*, and the Advantage which accrues from thence, for the Imbellishment of our *Gardens*; but at the same time, in my mind, I compare all young Persons before their being Educated, to so many *Wild-lings*, to be *Graffed*. It really seems to me, that as most *Trees* before their being *Graffed*, naturally produce none but ill *Fruits*, so most young People before their being Instructed, naturally incline to Evil; but Education intervening like, a kind of good *Graff*, to inspire them with Sentiments conformable to Reason, disposes and inclines them insensibly to Vertue, purging and divelling them at the same time of their Evil Inclinations; inasmuch, that being afterwards Influenc'd by good Maxims, they no longer swerve from what is just and reasonable, and ever receive the approbation of the Wise: And as Education is the Master-piece of Morality, so likewise it cannot be deny'd, but the Art of *Graffing* is what is most considerable in *Gard'ning*.

The *Roman* Oratour, conformably to many others among the Learned, who had explain'd themselves upon that subject before him, has taken delight inspeaking of that Invention, in terms so Noble, and so Elegant, that Posterity has been Charin'd with it: In effect, he expresses the singular esteem he had for it, very agreeably, and yet without seeming to insinuate upon the praise of its Ancientness, being willing as it were by his silence to incline us to believe that the Original of it is hardly known, and that without doubt we are only indebted to Chance for it; and indeed our Books of *Husbandry*, hardly mention any thing capable of giving us any agreeable useful insight into it; for, as for instance, what signifies it to believe, with *Theophrastus*, that we have receiv'd the first Idea of *Graffing* from the inside of the *Trunk* of a *Tree's* having produc'd another *Tree* of a different kind? That Author, who, to maintain his Opinion, lays a great stress upon that Adventure, delights in reciting the whole Story at length; for which Reason, he adds, that a Bird having swallow'd a whole *Fruit*, had afterwards voided it again accidentally in the hollow of that Old *Tree*, and that the Rains mixing with some rotten part of that hollow had made it sprout and grow, inasmuch that it was become a new *Tree* of the same kind of that whence this *Fruit* was Originally grown, which consequently was absolutely different from that hol-

*Cultus, &c in primis succos emendat acerbos, &c. Ovid lib. remedio amoris.*

*Sponte sua quae se tollunt in luminis auro, infecunda quidem, sed lata & fortia surgunt. Quippe solo natura subest. Tamen hac quoque si quis insulat, &c. Et paulo post. Exeruit silvestrem animum, &c. Georg. lib. 2.*

*Nec confitiones modo dellesant, sed etiam insitiones, quibus nihil invenit Agricultura Solertius. Cic. de Senectute.*

low

low Tree which had given Birth and Nourishment to that new Tree, as if it had sprouted in the open Ground.

What signifies it likewise for me to believe, with *Pliny*, that this Invention of *Grafting* proceeds rather from that a Plough-Man, who was a good Husband, being desirous to secure a piece of Land against the Spoils, he dreaded from without, unless his Field was well inclos'd, had sent it round about with a Pallisade of green Poles, and that in order to secure those Poles from rottenness, thereby to make them last the longer, he had thought himself of laying into the ground round about that Field *Trunks of Ivy*, with a design to intermix, as he did, the inferior Extremity of those Poles into the Body of those *Trunks*, from whence it happen'd, contrary to his expectation, that the *Sap* which was in the internal parts of those *Trunks*, serv'd for a nourishment to those Poles, just as if it had been a piece of good Earth, inasmuch that in process of time, they grew to be large Trees.

Now *Pliny* upon this Example, and *Theophrastus* upon the other, lay the Foundation of the Reflections, which, as they say, have given birth to the Art of *Grafting*; for my part, far from opposing their Arguments, I willingly submit to them, and am very ready to believe that those two Observations may have given some insight for *Grafting*, to which I add at the same time, that cleft *Grafts* have undoubtedly been practis'd first, in imitation of the Pear-tree Green Poles above mention'd: The success of those has since put our Gard'ners upon trying new Experiments for *Grafting*, which we find very useful; therefore I own that we can never praise the first Authors of the use of *Grafting* too much, nor sufficiently publish our Obligation to them for the main part of the innocent pleasures *Fruit-Gardens* afford us; for it is most certain, that without this admirable Expedient, we should to this hour, be all poor in respect to the different kinds of *Fruits*, since every body should have been reduc'd to the necessity of being satisfy'd with such as his Climate, or Chance had afforded him, whether good, or bad: It is the Skill of *Grafting* alone which has made the first Curious; the facility of Commerce has since increas'd the number ad *Infinium*, by reason that People freely and generously communicate their choicest Production to one another, and that particularly, because such Liberties do not in the least impair or diminish the stock or abundance of the Curious: And in truth, can any thing be so Delightful, and so Convenient, as to be able in the first place, by an easie Multiplication, which is at our Command, to enrich our selves with good *Fruits*; and secondly, to be able to get from, and send to distant Countries Reciprocally, and at a very easie Rate, wherewith to Entertain the Persons of the greatest Quality, as well as the most solitary Descarts, as also to add to the good Cheer of Banquets, and relish the delicacy of the Pallate, as well as to Charm the Curiosity of the Eyes, and the greediness of the Nostils? But above all, who can express the great satisfaction Gentlemen receive, who have made it their business to *Graft* in their Gardens? For Instance, one that shall have *Grafted*, in order to make some *Wildling* change its Nature, another to multiply some good *Fruit*, and in both Cases, nothing can equal the Transports of our Gentleman Gard'ner, when coming to enjoy the Fruit of his Industry, he shows his handy work, and imparts the *Fruits* it has produc'd.

The History of Great Men, who have delighted in this Art, has sufficiently mention'd it, without my inserting any Particulars about it; therefore I shall only say, that as the great delight of the Famous Gard'ner of the *Georgicks* (which the Poet makes no scruple of Comparing to the Pleasure of Kings) consisted in finding at his coming home at night, wherewith to maintain, and treat his Family, without buying any thing, (no body can question but it was with the *Fruit* and *Legumes* of his Garden, seconded by some Profits of his *Poultry*, *Dairy*, &c.) so the Pleasure of our Curious consists in filling their Gardens with all manner of good Trees, which cost them nothing, that is, out of their *Nurseries*, without reckoning the satisfaction of being able to present them to those Friends they respect and value.

It were perhaps to be wish'd, in the Case of *Grafts*, that People had been satisfy'd with the bare improvement of that fine Invention, without pushing it to excess, and tormenting themselves to produce monstrous *Fruits* by a world of Projects, as ridiculous, as useless; our Books have endeavour'd to persuade us about the success thereof, but Ingenious Men give but little Credit to them: I believe there are but few, who upon the Report of some of the Ancients, have made it their business to *Graft* Vine upon *Walnut*, or *Olive* Trees, in hopes to get Bunches of *Oyl*, or to *Graft* good *Fruits* upon *Plain* Trees, or *Alb*, and *Cherries* upon *Lawrel*, *Chestnuts* upon *Beach* Trees; *Onks*, upon *Elms*, *Walnuts* upon a *Shrub*, and all in hopes of raising new kinds of *Fruits*; and therefore, tho' with submission, and respect to the memory of Great Men, I must needs say, that all their Attempts have for the most part been faulty; it is sufficient that all good kinds of *Fruits* may be *Grafted* with success, upon

Sunt alii, qui  
hæc via sibi re-  
perit mior.  
Georg. 2.

Of all Arts the  
most generous,  
and most proper  
for a Gentleman  
is the Art of  
Husbandry.  
Xenophon.

Ut gaudet  
imilitia decer-  
pens piri.  
Horat. Epod. 2.

Regum aqua-  
bat spes dimittis  
seraque rever-  
tente mille do-  
minum dapibus  
transas celebra-  
bat nempis.  
Georg. 2.

Et floriles  
plantani mævis  
gellere valentes.  
Georg. 2.

Cassanea Pa-  
gus, omni-  
tunc inuit alba  
Flora piri:  
glanæque sacæ  
fregere sul-  
misi! Et paulo  
superius inferi-  
tur verax feru-  
nucis arbutus  
horrida. Et alio  
loco Cy prunus  
lupidula rubes-  
cere corna.  
Georg. 2.

upon *Wildlings*, or other *Stocks* of a Nature approaching to theirs, and the only use we ought to make of the Visions of the Curious which have preceded us, is to avoid falling in the same Inconvenience with them, in losing so much time and Pains, as they have done in making a thousand such Extraordinary Effays.

Now in order to enter upon the Matter, you must know, that, as I have already said else where, *Grafting* and *Enter*, or *Ingrafting*, are Sinonymous Terms, only us'd in *Gard'ning*, which without doubt are merely of the Institution of our own Tongue, and my reason for it is, that they have no relation to the Latin Term *Inserere*, which apparently has preceded them, and signifies the same thing, with this difference, that it is much more significant; But however, to give as perfect a Notion of it as we can, we are oblig'd to say, that those two Terms have the same signification as the Latin Term, to Plant part of some Tree, which we valued, upon some part of another Tree, of which we do not like the kind; this manner of Planting is very singular, and causes, as the Prince of Poets tells us, the head of that last Tree to change its kind in the whole, or in part, according to the Intention of the Gard'ner; thus an *Almond Tree*, becomes a *Peach Tree*, a *Quince Tree*, a *Pear-Tree*, &c. Another Illustrious Poet of the same Age, casually speaking about that manner of *Grafting*, says very Ingeniously, that it is a kind of Adoption Introduc'd among Trees, by means of which good Trees are Multiply'd with ease, in making use of those *Stocks* which produc'd none that were good.

This alteration of Kind, or this Adoption cannot be perform'd, without some operations, of which the very names are Capable to strike People with Horror, Heads to be Saw'd, Arms to be Cut, Bodies to be split, Ligatures, Philters, Incisions, &c. The explanation of what relates to this matter of *Grafts*, will unridde this Mystery clearly.

In the first Place it is to be noted, that *Grafting* is not perform'd all the Year round, but only in certain Months; Secondly, that in relation to the Trees you *Graft* upon, you must of necessity Cut and retrench a great deal of them, sometimes immediately, and at other times, only five or six Months after, that is, a considerable part, either of the *Stem* or *Branches*; and that without meddling in the least with what we call the Foot of the Tree: This Tree being, as it were, ignorant of what has been done to its Superior Part, and Subsisting still, that is, continuing to Act in the Ground as it us'd to do, and tho it no longer has occasion to Nourish either the *Stem* or *Branches*, which it had Originally produc'd, and were its real Offspring; this *Foot*, I say, in obedience to the Gard'ners Industry, labours to stretch out, thicken, multiply, and cause to Fructify, either the bare Eyes or *Buds*, or the foreign *Branches* that are Substituted, while finally, upon its *Stem* or *Branches*, and those new *Branches*, in the sequel, taking the room of those that have been retrench'd, become the Adopted Children of that *Foot*, and Joyn so perfectly and so closely to it, that they appear to be absolutely its Legitimate Offspring; whence it follows, that its Function for the Future, is no other than to serve, as it were, for a Nurse to these new Infants.

In order to understand this Description of *Grafts* perfectly, which hitherto appears obscure and enigmatical, it is necessary in the first Place to declare the different kinds of *Grafts* that are in use: Secondly, the proper time to make them; and finally the manner of making them well; there are great differences among the one and the others. In the next Place we shall add, which are the proper *Stocks*, that have a Natural Disposition to receive certain kinds of *Fruits*, and can agree with no other.

## CHAP. XII.

Of the kind of *Grafts* that are in use.

THE *Grafts* that are most commonly us'd are *Inarching*, *Budding* or *Inoculating*, the *Cleft*, the *Crown*, or *Grafts* between the *Wood* and the *Bark*, and *Whip-Grafting*.

*Inarching* is for *Chestnuts*, *Marons*, *Fig-Trees*, &c.

*Budding* or *Inoculating* is for all manner of *Fruits*, both Kernel and Stone, and sometimes for other Trees that bear no Fruit.

The *Cleft* is also proper for all manner of good *Fruit Trees*, and even for other great Trees, provided both the one, and the other have, at least three or four Inches Circumference at the place where the *Graft* is to be perform'd; *Clefts* are not generally so proper for

Veneris Insi-  
tis. Fac ram-  
num ramos ad-  
doper, Stetque,  
Pergrinita  
ber opera comit  
pissque adopi-  
sione, accipit ar-  
bor opes. Ovid.  
lib. 1. de remed.  
amris.

Et Sapē al-  
terius ramos  
impune, vide-  
mus vertere in  
alterius, mista-  
tamque infusa  
mala ferre Py-  
rum. Georg. 2.  
Inuileque  
fale Ramos  
amputans falsi-  
ciosos inferis.  
Horat. Epod.  
Tamen hæc  
quoque si quis  
inserat, &c.  
Cultusque fre-  
quenti in quæ-  
cunq; voces  
arrit, haud  
tarda sequen-  
tur. Georg. 2.

for Stone Fruit, especially *Peaches*, as for Kernel Fruit; the Curious of some Provinces in *Guyenne* affirm the Contrary.

The Crown or *Graffs* between the *Wood* and the *Bark*, as well as *Whip-Graffing*, are particularly for thick *Branches*, or for thick shorten'd *Stems* of Kernel Fruit, and are nought for Stone Fruit, as well as for all *Branches* and *Stems* of a moderate Size, which are too weak to press their *Graffs* sufficiently.

## CHAP. XIII.

### Of Proper Times to Graff.

THE Proper Times to *Graff*, are *First*, the beginning of *May*, in which the *Sap*, being risen into the *Trees*, especially in the *Branches* of the preceding years Growth, without the *Eyes* or *Buds* having shot yet, the *Bark* loosens easily, insonmuch, that they may be stript with ease, which is necessary for those kind of *Graffs* in question. This Month of *May* is only proper for *Inarching*, which as we have already said, is only fit for *Chestnut*, *Maron*, and *Fig-Trees*, &c.

\* *A la Ponce*, as the Author Terms it. Secondly, The middle of *June* is proper for *Inoculating*, \* which is only to be us'd for certain Stone Fruits; for Instance, for *Cherries*, *Morellos* and *Bigarreaux*, upon a small bitter *Wild-Cherry*, and *Peaches* upon old *Almond-Trees*, &c.

Thirdly, The Months of *July* and *August*, for *Budding* or *Inoculating Trees*, which by the small Vigour of their *Foot*, or else by reason of the excessive Heat and Draughts which happen sometimes at that Time, seem to have a visible, if not total diminution of *Sap*; for you must know, that this way of *Inoculating*, with a close *Eye* or shut *Bud*, requires but little *Sap*, particularly from the *Stock*, upon which, after having made the necessary Incision, the *Scutcheon* must be apply'd: Too great an abundance of *Sap* in the *Stock* is pernicious to that apply'd *Scutcheon*, by reason that it is commonly Drown'd there with Gum, whereas it should only stick, without meeting any thing there for the remainder of the year capable of making it *Shoor*; it stands in need but of a very small help to preserve it from Death, in expectation of a kind of vigorous Resurrection, which the *Spring Promises*, when it recovers out of its Lethargy; as to the *Twig* from whence the *Bud* is taken, it can never have too much *Sap*, provided the *Bark* be sufficiently well nourish'd to strip with ease from the *Wood* it covers, and take along with it the Internal *Sprout* which forms the principal part of that *Scutcheon*; the Common *Stocks* which are *Budded* upon, during those two Months, are *Plum-Stocks*, for *Plums*, or *Peaches*, young *Almond-Stocks* Planted in an ill Ground for *Peaches*, *Quince-Stocks* for *Pears*, *White-Thorns* for *Apricocks*; *Paradise-Stocks* and *Apple-Wildlings*, for good *Apples*, &c.

The Month of *September* is proper for *Inoculating Peach-Trees*, upon Vigorous *Peach-Stocks*, or young *Almond-Stocks*, of that years Growth; Planted in good Ground, both the one and the other have the gift of preserving abundance of *Sap* very safe; and they are only fit to *Bud* upon, at the Time of the Declining of that *Sap*.

We might *Graff* in the *Cleft*, during the Months of *November*, *December*, and *January*, but one is never the more forward, on the Contrary, it is much to be fear'd that the *Graffs* would Wither and absolutely Perish, by reason that during these Three Months, they receive no assistance from the Root, which at that time, by reason of the Cold, is, as it were, benum'd of all its *Vegetative Functions*.

All the Month of *February*, and a considerable part of *March*, are admirable for the *Cleft*, and for *Whip-Graffing*, but that is to be understood, when by reason of the length of the Colds of the *Winter*, the Season is not forward, and Consequently the *Trees* not yet enter'd into *Sap*, that is before the *Bark* quits the *Wood*; for as soon as ever it loosens, such *Trees* can no longer be *Graffed* in the *Cleft* that year. Therefore it is necessary, to provide betimes, particularly against that time, *Graffs* of *Pears*, *Apples*, *Plums*, &c. especially when they are to come from distant Countries.

The

The end of *March* in mild Springs, I mean such, which instead of being accompani'd with Snows, and small Frosts, as it is usual, are Hot and Moist; the first half of *April*, particularly is very favourable for the *Crown*; by reason that the *Sap* must of necessity be sufficiently risen into those shorten'd *Trunks*, to be able to divide the *Bark* from the *Wood*, with small wedges made of *Box*, or *Ebony*, in order to facilitate the Lodging of the *Graff*, that has been prepar'd on purpose for it.

The Month of *April* is only proper to *Graff* all manner of *Apple-Trees* in the *Cleft*, by reason that those kind of *Trees* are not so easily mov'd to produce *Sap* as other *Fruit-Trees* are, and as I have declar'd already, the only time to *Graff* in the *Cleft* is a little before the *Trees* begin to *Blossom* and *Shoot*; the said Month of *April* is likewise Convenient to *Graff Vines*, which can only be *Graffed* in the *Cleft* upon *Trunks* cover'd with *Earth*.

## CHAP. XIV.

### Of the manner of Performing all manner of Graffs.

HAVING Explain'd the different sort of *Graffs* that are now in use, and the different Months of the Year, that are proper for each of them, there still remains to explain the proper manner of performing them; and therefore, I shall begin with the Description of the *Graffing-Knife*.

The Blade of this *Graffing-Knife* must be about two Inches long, with a small Handle, a full Inch longer than the Blade, or ordinary Knives, the overplus of the Handle must be flatten'd on the Extremity, and made round, about the Edges of that Extremity, in order to serve to loosen the Rind of the *Wildlings* with ease, upon which the *Scutcheon* is to be apply'd; the most Convenient *Graffing-Knives*, are those which close within the Handle, like *Pruning-Knives*, or like the Common Pocket-Knives that are made to fold.

Now since in the order I have observ'd for *Graffs*, I have begun with that which is perform'd first in the finest Season of the Year, *viz. Inarching*, I think it will be proper to begin this Chapter with the manner of doing it as it should be; and therefore, I say, that in order to succeed in it, in the first place the *Twig* that is designed to *Graff* with, which you must hold in your hand before you begin, in order to make the necessary Comparisons the better, between the *Twig* and the *Branch* that it is to be *Graffed* upon, either with *Thred*, *Ruff*, *Ribbon*, &c. by reason that this *Twig* must be exactly of the same thickness with the *Branch* you are to *Graff* upon; for it being thicker or smaller, the *Graff* will not succeed. Next, you must chuse a fine Place upon the said *Twig*, having two good *Eyes* or *Buds*, looking regularly the one on one side, the other on the other, and with your *Graffing-Knife*, or other sharp Instrument you must cut the *Bark* of the Piece you are to take off for the *Graff*, Circularly to the very *Wood*, both at the top and bottom; you must take off all the *Bark* which covers the smallest part of the said *Twig*, in order to make that Piece come out there, which is to be taken off after having loosen'd it from its *Wood*, by twisting it gently with the *Thumb*: But before you take it quite out of its Place, you must shorten the *Branch* that is to be *Graffed* upon, four or five Inches, and without wounding the *Wood*, you must strip it intirely in a very sound, and very smooth place, unto the lower part where the *Graff* is to come, that it may fit it so exactly, that it may rather be thought it grew there Naturally, than by Art, and immediately, in order not to permit a small Moisture which lies round about the part so strip, which is the *Sap* newly risen, to Evaporate, you must make an end of taking the piece that is design'd for the *Graff*, out of its Place, and Lodge it with all the Diligence, and dexterity imaginable within the *Branch* so strip, to the place where 'tis to remain, and finally to hinder the moisture of the Air from penetrating into the space between the *Wood* of the *Branch* that is *Graffed*, and the *Bark* that is newly apply'd, you must raise small Shavings out of the *Wood* of the *Branch* round about the Superior Extremity of that *Graff*, without putting them off, and make them hang like a kind of *Ruff* on the Extremity of that *Bark*, to cover, and shelter it from the Injuries of the Air.

*Inoculating* or *Budding*, *A la Ponce*, (which I take to be with an open *Bud*) and with the close *Eyes*, or shut *Bud*, only differ as to the Time of performing them, as we have already

Nec minus inferre atque oculos imponere simpliciter, &c. Georg. 2.

The Figure of the Graffing-Knives is Described in the Plate of the Pruning-Knives, P. 15. Vol. II.

Huc aliena ex Arbore gemmae includunt, adeoque docent intelligere libro Georg. 2.

dy observ'd; they are both perform'd in the same manner, the first thing to be done in order to it, is, to take from the *Tree* you design to *Graft* with, *Cyons* of that years Growth perfectly at a stand, upon which you find good *Eyes* or *Buds*, likewise at a stand, and they are those which have been first form'd since the *Spring*, those that are form'd last being too tender to Succeed: As soon as those *Twigs* are cut, you must take off the *Leaves* close to the Place where they stick to their *Stalks*, by which means the *Eyes* or *Buds* will not Wither so soon; the *Cyons* may be preserv'd three or four days, provided the Butt end be plac'd in Water, or any thing that is Moist, and the *Twig* not above half a Foot long; inasmuch that one may very well cut a *Twig* that is two Foot long into several Pieces: With these two Precautions you may very well send those *Twigs* newly cut from the *Trees*, thirty or forty Leagues off (Note, that if they be *Twigs* taken from *Peach-Trees*, you must seldom take any *Scutcheons* from them, unless the *Eyes* be double or treble, that is, unless you find the beginning of a growing *Branch* accompani'd with *Leaves*, and two beginnings of *Fruit Buds* to the Right and Left, or other *Branches* to come) as for other *Fruits*, *Pears*, *Apples*, *Plums*, &c. a single *Eye* is as good as a double, or treble one, &c.

When you are ready to *Bud*, you must Chuse upon the *Branch*, or *Stem* you design to *Inoculate* upon, a fine smooth place, which is generally met with, in the space which divides the inferior *Eye* from another which is immediately above it, where you must make two Incisions representing a great *Roman T*, that is the upper Incision Horizontal, and the second beginning near the middle of the first Slit descending downwards, about an Inch or an Inch and a half in length; these two Incisions may be made before you take off the *Scutcheon* you are to apply, provided the *Kind* of the *Wildling* be not separated until the *Scutcheon* be ready; by reason that it is necessary that the *Scutcheon* should meet with some Moisture in that part of the *Wildling* it is to be apply'd to, and that this Moisture should proceed from the *Sap*, which must Glue it to the said *Wildling*; otherwise the place being Dry, the *Graft* would Perish, therefore the safest way is to begin by taking off the *Scutcheon* before you make your Incision on the *Wildling*; now in order to take off the *Scutcheon*, particularly for *Peaches*, you must make an Incision like to the

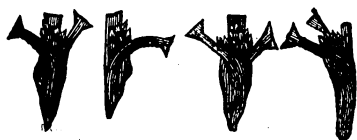


Figure A upon the *Twig* or *Shoot*, in that part where you observe a good *Eye* or *Bud*, which is partly the Figure of the *Scutcheon* of a *Coat of Arms*, from whence *Gard'ning* has borrowed that Term of *Scutcheon*, after which pressing the *Thumb* close upon the sides of that Incision towards that part which is near the *Eye* that is contain'd within the space of the Incision, it is easily loosen'd from the *Twig*, provided the *Sap* be plentiful there, otherwise, tho' even in the Case of *Peach-Trees*, the *Scutcheon* must be raised with a Wedge of *Wood*, which must be perform'd by Slipping the *Grafting-Knife* under the *Bark* from the Head of the *Scutcheon* to the Point, biting a little into the *Wood*, especially about the *Eye*, &c.

As to the *Scutcheons* of *Kernel Fruits*, they can hardly be taken off otherwise than with a Piece of *Wood*: When the *Scutcheon* is taken off, you must look whether the inward *Sprout*, which is the Channel through which the *Sap* is Communicated for the Production of a new *Branch*, hold to the said *Scutcheon*, as it must absolutely do, which being so you shall hold this *Scutcheon* in your Mouth, only between your Lips by the end of the *Stalk* of the remaining *Leaves*, by reason that Spittle might prejudice it; in the mean time take care to separate the *Rind* dexterously, by degrees, with the flat end of your *Knife*, without leaving any thing along the two long sides of the Incision, being careful that the Incision may be somewhat longer towards the Point than the *Scutcheon*, then take the *Scutcheon* out of your Mouth, and presenting the pointed part thereof to the Horizontal Incision, make it slide down all along the Incision; inasmuch that it may be Lodg'd there intirely, and especially that it may fill up all that part which is stript at the Head of the Incision, and finally that the sides of the *Bark* that are loosen'd, may afterwards come to cover all the *Scutcheon*, excepting the *Eye*, this being done, you must take course flat *Flax*, wherewith you must gently, and nearly, tie the *Scutcheon*, the loosen'd *Bark*, and the

Branch

*Branch* together, to the end that they may the better joyn together, and there ends the Mystery of *Inoculating*, or *Budding*, with this difference only, that when it is perform'd in \**June*, the *Branch*, or *Stem* to *Budded*, must be immediately shorten'd within two or three Inches of the *Scutcheon*; to the end that the *Sap* being hinder'd from ascending higher (as it naturally would do) it may be forc'd to enter into that *Scutcheon*, in order to make it shoot soon after: *Meriziers*, a small wild bitter *Cherry*, to *Budded*, commonly succeed better than any *Fruit-Trees*, and especially better than *Peach-Trees* *Budded* in *June*, either upon other *Peach-Trees*, or Old *Almond-Trees*; by reason that they are very subject to perish with Gum, and that by an over-abundance of *Sap*, which being in the Summer in the *Trees* that are *Inoculated*, and not finding a sufficient Issue at the overture of the *Eye* of that *Scutcheon*, comes out at the Incision, there Congeals like Blood out of the *Veins*, and absolutely destroys the said *Scutcheon*; but when this *Inoculation* is perform'd with a close *Eye*, or shut *Bud*, neither the *Branch*, or *Stem* to be *Grafted*, must be immediately shorten'd, you must tarry until the Month of *March* following, which is the time that the *Sap* begins to mount up into the *Trees* again, which is the proper time to shorten them in the same manner we have express'd for the *Budding* in *June*, the same reason serving for both, provided always, that before that time, that is, during the Winter, the *Flax* which did tie the *Scutcheon*, has been cut neatly, without wounding the *Bark* that was cover'd by the said *Flax*; for unless it were cut, all the part so tied, and what is above it, would be apt to perish for want of a sufficient passage for the *Sap*, which would ascend to the Extremity of the *Branch*, and thereby all pains taken about the *Inoculation*, would prove vain, while the lower part below it, would shoot abundance of Wild *Twigs*, of no use.

The Description of the *Clefts* we have in the *Georgicks*, tho' admirable in it self, might yet be much better, if it were more compleat, more particular, and more instructive; it only tells us, that in order to Perform this *Graft*, the head of the *Trees* must be cut off, in that part where the *Stem* appears most even, and least knotty, that we must cleave the said Stock pretty deep with Wedges, and finally, that we must lodge *Cyons* of better *Fruts* into those *Clefts*, which in time produce fine large *Trees*.

The Reading of that Description does not appear sufficient to me, to Instruct a new Learner in the Art of *Grafting*, to perform it as it should be, it is deficient in several Articles, First, because it does not inform us that we may not only *Graft* upon thick shorten'd Stocks, but also that it may be done upon several *Branches* of *Trees*, either *Dwarfs*, or tall *Standards*, even upon Stocks of two or three Inches Circumference, provided they be capable of suffering the *Cleft*, and of closing the *Graft* sufficiently.

It is defective in the Second place, in not specifying the proper time for those kind of *Grafts*. We have explain'd it already.

Thirdly, It is defective, in not fixing the length of the *Twigs* that are employ'd about it: We commonly regulate it to two or three Inches in length, or rather upon the number of three good *Buds* at least, which the *Graft* must have.

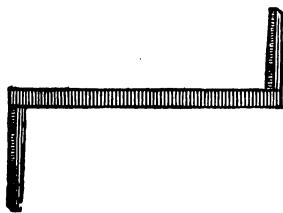
Fourthly, it is deficient, in neither teaching us how to *Prune* the *Grafts* well, nor how to place them so exactly in the only places that are proper for them, that the *Sap* of the Foot may enter securely into them: As for the *Pruning* of those *Grafts*, in order to perform it well, the Butt-end of them must be Cut with a very sharp *Pruning-Knife*, on both sides in the form of a Wedge, about half a large Inch in length, preserving on the two sides which Edge that Figure of a Wedge, some *Bark* sticking very close to the *Wood*, the side which is to be most outward must be somewhat broader, and thicker, than the other which is inward, and precisely on the top of that *Bark* preserv'd for the outside, you must have a good *Eye*, or *Bud*, as high as the edge of the shorten'd Stock, and the upper part of the *Cleft*; and as to the well-placing of the *Grafts*, the inside of the *Barks*, both of the *Wildling*, and of the *Grafts*, must be so exactly fitted, that the *Sap* rising from the Foot, may as easily enter into the space between the *Wood*, and the *Bark* of the *Graft*, as between the *Wood* and the *Bark* of the Stock, or *Branches* *Grafted* upon.

The Description is likewise deficient, in the Fifth place, in not observing, that in case the *Cleft* be not made very curiously, as it happens often, you must pare it with your *Pruning-Knife*, removing whatever might obstruct or hinder the *Graft* from entering freely, may more, in case there be cause to judge that the *Graft*, by being a little too small, in proportion to the Stock, may be a little too much press'd, it is necessary to pare the wood on both sides of the *Cleft* very neatly, and very smoothly, which is to be done with the point of a very sharp *Pruning-Knife*, beginning from the lower part upwards, and all this so exactly, and so conformably to the Figure of the *Branch* that has been cut for the *Cleft* *Graft*, that after having lodg'd the *Graft*, there may appear no vacuity between it, and the sides of the *Cleft*; and yet, that the *Graft* may stick so close, that it may not be able to move it.

Sixthly, The Description is defective, in not mentioning how many *Grafts* may be apply'd upon one *Stock*, and how the upper part of the *Stem* being Cut must be prepar'd; large *Stocks*, or *Branches* that are to be *Graft'd* in the *Cleft*, must be very smooth at top, and equal on all sides, inasmuch that the head may be Horizontal, to place several *Grafts* upon it, if there be room, and the *Stock* requires it; small *Stocks*, or *Branches* that cannot receive above one *Graft*, must only be smooth'd in one part of the Head; and if that part where the *Graft* is to be apply'd, the remainder must be Cut like the Foot of a Hind.

Finally, the said Description is defective in not informing us how to secure our *Graft'd Trees*, and hinder them from being prejudic'd by the Injuries of the Air, Rains, Hears, and Droughts, through the overtures of the *Clefts*, whereupon it is to be noted, that all *Clefts Grafts* must be swaddled with fine *Earth*, and Hay newly prepar'd, or else with Gum prepar'd to that end, compos'd either of black fat Pitch, melted in an Iron Pot, or *Earth* mix'd with a little yellow Wax, the said Gum must be kept hot, and liquid, over a Chaffing-Dish, to be apply'd with a kind of Wooden Tule; but before you apply either the *Earth*, and Hay, or the Gum, you must cover all the Crannies with some Barks, immediately loosen'd from some *Branch* of the *Tree* that is *Grafted*; they are commonly put crosswise on large *Stocks*, or *Graft'd Branches*, in order to cover the *Clefts* so well, that nothing may get into them; and whereas we generally cover the *Earth*, and Hay, with a piece of Linnen to keep it fix'd about the Head that is *Graft'd*, which has some resemblance to a Child's Baby, we often call the *Cleft Graft* a Baby-Graft: *Nota*, that when the *Stock* does not seem to press the *Graft* sufficiently, it must be bound about with some tender *Twigs* of an *Ozier*, in order to secure the *Graft*.

I conclude what relates to *Cleft Grafts*, after having declar'd what I can say about *Wedges*; which is, that before you make use of them to open the *Cleft*, you must, in case it be a large *Stock*, begin the *Cleft* with the edge of a pretty large Knife, apply'd upon the whole breadth of the *Trunk*, or *Branch*, striking with a Hammer upon it, in order to make the said edge enter pretty deep into the *Wood*, and thereby mark the *Cleft* in question: *Stocks* of a moderate size are easily enough *Clefts* with the bare edge of the Knife, without the help of a Hammer.



The *Wedges* to be Convenient must be made according to the Model of this Figure, one of the *Hooks* being thicker, longer, and stronger than the other, which is to serve for large *Stocks*, and the other being both shorter, smaller, and weaker, for small ones: In order to use those *Wedges*, that which seems best proportion'd for the *Stock* that is to be *Grafted* upon, must be plac'd in the middle of the *Cleft* that is begun, and when it cannot enter sufficiently, to make the Overture that is necessary, it must be driven in with a Hammer: In fine, the *Cleft* being partly large enough, to lodge the *Graft* into it, you must raise or pull down the end of the Tool that serves for a *Wedge*, with the left hand, in the mean time, with the right, placing the *Graft*, Cut as aforesaid, to the place where it is to remain; and thus you may make an end of stretching, or closing the *Cleft*, according as you may judge it proper, when the *Graft*, or *Grafts* are plac'd as they should be. I need not tell you, that one *Cleft* may serve to place two *Grafts* opposite to one another, and when two more can be plac'd, a second *Cleft* may be made Crosswise upon the *Stock*, altogether like the first, using the same Method prescrib'd about the two first *Grafts*.

We sometimes call it *Grafting* in the *Crown*, when we place four *Grafts* *Cleftwise* upon a *Stock*, that is large enough to receive them Conveniently; but it is more particularly call'd so, when upon very large shorten'd *Stocks* we place a greater number of *Grafts* between the *Wood*, and the *Bark*, for instance, 6, 7, 8. and therefore this kind of *Graft*, as well as that we call *Whip-Grafting* can only be perform'd upon such *Stocks* as exceed three or four Inches Diameter, which cannot be *Cleft*; but we seldom use either of them, by reason that the success is very uncertain, and the trouble of making them very Considerable;

ble; to that end *Twigs* are us'd about half an Inch Circumference, with four or five good *Eyes*, or *Buds* in their length; they must be Cut slantingly at the Butt-end, inasmuch that the slope may be about an Inch long, and that the upper part of it may be Cut close to the Pith of the said *Twig*, in order to be as small as possible can be at the end, and whereas the *Sap*, which begins to rise from the *Foot*, passes betwixt the *Wood*, and the *Bark* of the *Graft*, those sloping sides must be plac'd on the side of the *Bark* of the shorten'd *Stock*, by which means the *Graft* will receive its nourishment. But before you place those *Grafts*, you must take out a little of the *Wood* of the *Stock* with a small Joyner's Chizel, from those parts where it is to be plac'd, loosening the *Bark* with a tough Wooden *Wedge*, striking dextrously with a Hammer upon the said *Wedge*, without prejudicing the *Bark*; the *Graft* being lodg'd, the same thing must be done, we have already declar'd to secure the *Cleft Grafts* from the injuries of the Air.

As for *Whip-Grafting*, Slopes or Notches must be made into the *Bark*, and into the *Wood* of the shorten'd *Stocks*, chusing *Twigs* about an Inch in Circumference, Cutting the *Grafts* in the same manner as those that are for the *Cleft*, proportioning the *Twig* to Cut, so exactly to the Notch of the *Stock*, that it may enter with some small difficulty, to the end, that the inside of the *Barks* may meet exactly, and that no space may remain between the sides of the *Graft*, and the slop'd, or notch'd sides of the *Stock*; this being done, you must take one or two large *Oziers* to bind the Head so *Grafted*, as firm as can be, that the *Grafts* may not easily be moved; doing moreover to secure the Head from the Injuries of the Air, what we have already prescrib'd for the *Grafts* in the *Cleft*, and in the *Crown*.

The Authors, and particularly the Ancients, who have written about *Grafts*, have all made mention of a certain *Inoculating*, as of a particular manner of *Grafting*; saying that this *Inoculation* is to be perform'd by placing the *Scutcheon* in such a manner, that the *Eye* or *Bud* thereof may be exactly plac'd upon that part where there was another *Eye* before the Incision was made, and they pretend that it is the best Method of applying the *Scutcheon*. Nay, moreover I do believe that they were of Opinion that the *Sap* of the *Stock Grafted* upon, could not enter into the *Eye* or *Bud* of the said *Scutcheon*, unless it were inclin'd to it by the Interiour Figure which remains upon the *Wood* that is strip'd, after the *Eye* is taken away: To which I answer, in the first place, That the daily Experience of all *Gard'ners* sufficiently confutes that Opinion, without my insisting upon it: Secondly, I answer, not only that there is no advantage by that *Inoculating*; but moreover, that it is almost impracticable, by reason that the *Scutcheon* cannot thrive, unless it be absolutely glued to the part to which it is apply'd; and consequently that part must be as smooth as the *Scutcheon*, which cannot be when a *Scutcheon* is apply'd upon an *Eye*, or *Bud*, which is an Elevated part, that forms a kind of Stub, contrary to what must be plain, and smooth: I have often try'd those *Inoculating*s, but have always lost my time, and Labour.

*Nam que se  
medio trudent  
decorit gem-  
ma et tenues  
rumpunt tunicas  
angustus in ipso  
fit nodo sinus:  
hic aliena ex  
arboe germen  
includunt, judo-  
que docent inno-  
lescere libro.  
Georg. 2.*

## CHAP. XV.

*Which are the Stocks that have a natural Disposition to receive some kinds of Fruits, each in particular, and to receive no others.*

THE *Fruits* in question in the Case of *Grafting*, are reduc'd to those we know by the Names of *Pears*, *Apples*, *Plums*, *Peaches*, *Cherries*, *Figs*, *Azarolles*, *Quince-Apples*, *Grapes*, *Sweet-Almonds*: To these we might add *Medlars*, tho' few Gentlemen care for them: As to *Oranges*, *Lemons*, and *Pomegranats*, I have given a sufficient account about them, in the Treatise of *Orange-Trees*. *Gosberries*, *Raspberries*, *Melons*, *Strawberries*, and *Avelins* are not in the rank of *Fruits* that may be improv'd by *Grafting*. *Pears* succeed very well, *Grafted* upon *Pear-Wildlings* grown from *Trunks* in Woods, and Forrests, and they are the best *Fruits* to *Graft*, especially in the *Cleft* for *Dwarfs*, they are not fit to be *Grafted* *Scutcheonwise*, their *Bark* being too thick for it; those *Wildlings* are likewise very proper for *High-standards Grafted* in the *Cleft*. *Wildlings* grown from *Kernels* in *Nurseries*, and the *Suckers* that shoot from the *Roots* of the *Foot* of Old *Pear-Trees* in *Orchards*, are likewise good to *Graft Pears* upon; either to be *Budded* while they are very young, or *Graft'd* in the *Cleft* when they are grown large; but they are much better

better for *Talk-Standards*, than for *Dwarfs*; they are too Vigorous to remain Low, and to submit to the hardships of *Pruning*.

*Quince-stocks*, especially such as are very sound, and produce large *Leaves*, and fine *shoots*, and have a smooth shining blackish Bark (they are call'd Females, and those that are wrinkled, and shrunk, Males; tho' for my part, I do not admit that difference of Names; it is an Act of *Vegetation*, in which I only distinguish the degrees of Vigour in every *Foot*) those kind of good *Quince-stocks*, I say, are admirable to *Graft* all manner of *Pears* upon, against a Wall, or for *Dwarf-Standards*, with a *Scutcheon*: Nay, sometimes they will grow to be *High-Standards*, being Planted against a Wall, otherwise they are apt to unglue, that is, to separate cleverly from the part where they are *Grafted*, in great Storms of Wind: The *Cleft* is seldom, or never proper for those kind of *stocks*, unless the *Quince-stock* be large enough to press the *Graft* close, and even then they must be us'd but seldom.

*Nota*, That there are some kind of *Pears* which are difficult to take upon *Quince-stocks*; for instance, Summer *Musky Bon-Chretien's*, and *Portails*; to which I add, lastly, that *Pear-Trees Grafted*, have as it were that Complaisance for one another, to serve each other Reciprocally for *stocks* for a change of *Grafts*: Yet, notwithstanding, some are peevish, and untoward in that Case; for Example, *Thick-stalk'd-Pears*; *Pears* are sometimes *Grafted* upon *Apple-stocks*, either *Wildlings*, or *Paradise*, and upon *White-Thorns*, and *Medlars*, but commonly they are not lasting, or else they pine: There is certainly a kind of Antipathy in their *Saps*, inasmuch that they cannot mix together, and can suffer no Commerce of *Grafting*.

The same thing I have been saying of *Pear-Wildlings*, and *Quince-Trees*, in relation to the *Grafts* of *Pear-Trees*, which succeed very well upon them, must be said of *Apple-Wildlings*, either grown from *Trunks*, or *Kernels*, or *Suckers* of the *Roots* of Old *Apple-Trees*, in Relation to the *Apples* that are *Grafted* upon them, with this difference only, which seems surprizing between the *Quince*, and *Paradise-stocks*, that the *Paradise-stocks*, being any thing large, are extraordinary good *Grafted* in the *Cleft*, and seldom succeed *Grafted* with a *Scutcheon*; whereas it is the clean contrary with *Quince-stocks*.

Moreover, *Apple-Wildlings*, whatever they be, and however *Grafted*, are fit to make *High-Standards*, but not in the least fit for *Dwarfs*; and the quite contrary with *Paradise-stocks*; inasmuch, that *Apple-Trees* must never be Planted to remain *Dwarfs*, and take up little room, unless they be *Grafted* upon *Paradise-stocks*, these quickly bear *Fruit*, and shoot but little *Wood*; the others are a long while producing nothing but a vast quantity of *Wood*, which makes excessive large *Trees*, and are long before they bear *Fruit*: *Apples Grafted* upon *Pear-Trees*, or *Quince*, succeed no better than the *Pears* that are ventur'd to be *Graft'd* upon *Apple-stocks*, or *Paradise*; altho' the Poet seems of a different Opinion, but I rather believe, that he uses indifferently, for all that relates to *Kernel-Fruits*, the Terms of *Pyrus*, *Pyrum*, *Pomus*, *Pomum*.

*Plum-Trees* are neither *Grafted* in the *Cleft*, nor *Budded*, unless upon other *Plum-Trees*, and that only upon a small number of kinds, for Instance, upon *St. Julian's*, *Black Damask*, and little *Cherry-Plum*, &c. and seldom succeed upon good kinds; for Example, upon *Perdrigons*, *Apricock-Plums*, *St. Catherine's*, &c. I have sometimes *Grafted* some *Plums* in the *Cleft* upon large *Almond-stocks*, which have done indifferent well; but where I succeeded in one, I lost a great many others, and therefore there is but little to be got in making those kind of *Trials*.

*Peaches*, to succeed well, must be *Budded*, and seldom *Grafted* in the *Cleft*, at least in our Climes. Secondly, they must be inoculated with the *close Eye*, or *shut Bud*, and that in a proper Season, as we have heretofore declar'd, either upon *St. Julian Plums*, or *black Damask*, or upon *Apricock Trees* already *Grafted*, or upon young *Almond-Trees* of that years growth; they seldom succeed upon *Stones* of other *Peach*, or *Apricock Trees*; neither do *Peaches* succeed better being *Grafted* upon the Principal kinds of *Plums*, than the *Plum-Trees* themselves, as we have said already; *Peaches* *Budded* in the Month of *June*, are more apt to deceive the Gard'ners hope, than to confirm it; for the *Scutcheon* either perishes with Gum, without having shot, or often perishes after having shot; or lastly, as it commonly *Shoots* but weakly during that first *Summer*, it perishes the following *Winter* by Cold and by Ice, therefore, they must seldom be *Grafted*, and that but casually, and upon *Stocks*, that otherwise would be of no use.

Among what is vulgarly call'd *Cherries*, we reckon *Merises*, or a small Wild *Cherry*, both *White* and *Black*, *White* and *Black Hearts*, *Early* and *Late Cherries*, *Griotes*, *Bigarreaux*, *Cerisiers de Pied*, *White Cherries*.

All these kind of *Cherries* are *Grafted* except the *Merisiers*, or small *White bitter Cherry*, which are not worth it, but then those *Merisiers*, especially the *White* ones, which grow in

Inferre daphne  
pyros, carpent  
sua poma nepo-  
ses. Virg.  
Georg.

in the Fields, and in *Vineyards* from each others *Suckers*, are very good *Stocks* to *Graft* other Principal kinds upon; viz. *Haffy* and *Late Cherries*, *Hearts*, *Griotes*, *Bigarreaux*, &c. *Suckers* which Spring from the *Root* of other *Cherries*, Produce pretty good *Cherries*, and serve to be *Grafted* upon, particularly with *Early Cherries*, which are a kind of *Cherry* of a Moderate Size, that are seldom Planted but in *Espaliers*, to produce *Fruit* betimes; they are most Valued for their Earliness, and are no longer minded when the fine *Cherries* which come soon after begin to appear; *Early Cherries* require no very Vigorous *Stocks*, as the *Merises* do, which have a far greater Disposition to *Shoot* abundance of *VWood* than to bear *Fruit* Speedily.

You may *Graft Fig-Trees* if you please, but as I have already said in the Treatise of the Choice of *Figs*, there accrues but little Advantage by *Grafting* of them.

*Azerolles* are *Budded*, or *Grafted* in the *Cleft*, Particularly upon the *VWhite-Thorn*; they are likewise *Grafted* some times upon small *Pear-Wildlings* which Succeed pretty well, and sometimes upon *Quince*, and *Grafted Pear-Trees*, but the Success is not very certain.

As for the *Quince-Apple* it is seldom *Grafted*, by reason that *Quince-Trees* Produce *Fruit* so easily of themselves, yet they may be *Grafted* upon one another; thus you may *Graft Portugal-Quince-Trees* upon *French* ones, you may likewise *Graft* them upon *Pear-Trees*, whether *Grafted*, or *Wildlings*.

*Vines* are only *Grafted* upon old *Plants* of other *Vines*, and only in the *Cleft*; they are shorten'd on purpose for it, and when the *Graft* is made, the Place so shorten'd must be cover'd with *Earth*, yet without covering the *Twigs* or *Cyons* that are *Grafted*, the Heat of the Sun, and Drought, would kill the *Graft*, if it were left expos'd to the Air like the *Cleft-Grafts* of other *Fruit-Trees*; there is this difference between the *Cleft Graft* of *Vines*, and that of other *Fruit-Trees*, that the *Graft* is plac'd indifferently in the middle, or on the sides of the shorten'd *Trunk*, which cannot be done to other *Fruit Trees Grafted* in the *Cleft*, as we have observ'd heretofore.

*Medlar Trees* are *Grafted* either upon other *Medlars*, or upon *VWhite-Thorn*, or *Pear-Wildlings*, or *Pears Trees* already *Grafted*, or else upon *Quince-Stocks*.

*Almond-Trees* whether with hard or tender Nuts, grow most Commonly from *Almonds* put into the Ground, or *Grafted* upon one another.

## CHAP. XVI.

### Of Nurseries and Seminaries.

IT is proper to begin this Chapter, by saying that our *Nurseries* require a good Easey Soil, or ground, well Till'd, having at least two Foot and a half Depth; the *Trees* must be placed in rows at three Foot distance, according to the largeness of the *Trees*, and at a Foot and a half, two or three Foot distance from one another in the said rows, still according to the proportion of the Sizes: Of all *VWildlings*, *Almonds* are plac'd closest in the Rows. 'Tis easy to conclude, from what I have been saying in the foregoing Chapter, about all kinds of *Fruits* to be *Grafted*, what kind of *Stocks* are most proper to make *Nurseries* of all kind of *Fruits*.

First, for *Pears* you must Plant *VWildlings* out of *VWoods* and *Forests*, or *VWildlings* grown from *Kernels*, or *Suckers* Sprouted from the *Roots* of old *Pear-Trees*, or else *Plant Quince-Trees*, all which must be well Condition'd both as to the *Roots* and *Stem*.

Secondly, For the *Apple-Tree Seminary*; when you design to have them *High-Standards*, you must *Plant* pretty large *VWildlings*, taken out of *VWoods* and *Forests*, to *Graft* them in the *Cleft*, or *Kernel VWildlings* to inoculate them, when they are about two Inches circumference, and are to shoot up, in order to become *High-Standards*; and when you design to make a *Seminary* of *Dwarfs*, you must *Plant Paradise-Apple-Trees*, at a Foot distance in the rows: And that, by reason that those kind of little *Apple-Trees* shoot but few *Roots*, and consequently require but little *Room*.

Thirdly, To make a *Seminary* of *Plum-Trees*, you must only *Plant* the *Suckers* of certain *Plum-Trees*, viz. *St. Julian*, *Black-Damask*, the little *Cherry-Plum*, those that are large enough to bear it, are *Grafted* in the *Cleft*, and the lesser with the *Scutcheon*.

Fourthly, Good *Seminaries* for *Peaches*, must consist of *St. Julian*, and *Black Damask Plum-Trees*, which must be inoculated or *Budded* in the Months of *July* or *August*, or young *Almond-Trees*, that is, *Almond-Trees* grown from an *Almond Plant*.

ed in good Grounds in the Winter time, grown about September following half an Inch thick, to be Budded at that time: Old *Almond-Trees* of two or three Years standing are not proper to be Grafted.

Fifthly, to make *Nurseries* of red *Stone-fruit*, viz. *Cherries*, *Griottes*, *Bigarraux*; no *Stocks* are so proper as *Merisiers*, which is a small wild bitter *Cherry*, especially such as bear whitish ones; the Sap of the black ones is commonly so bitter, that the *Grafts* of good *Cherries* do not take upon them, or always pine away.

*Suckers* which spring from the *Roots* of other *Cherries* may serve to Graft good *Cherries* upon, but they are most proper to be Grafted with early *Cherries*.

Sixthly, *Fig-Tree Seminaries* are Planted with *Suckers* sprouted from the Foot of Old *Fig-Trees*, or with *Branches* of two years standing laid into the Ground, and notch'd in that part which is most bent, and laid into that Ground.

Seventhly, for the *Nursery* of *Azeroles*, you must only Plant *White-Thorn*, and some few *Quince-stocks*.

Eighthly, no *Nurseries* are made for *Vines*, they are seldom Grafted otherwise than upon Old Plants, ready Planted.

Finally, for *Medlars*, People seldom make any particular *Nurseries*, the least quantity of them is sufficient, a dozen *Wildlings* of that kind, or *White-Thorn*, or *Quince-stocks*, are sufficient to provide for the Largest Gardens.

Before I proceed to the Sixth Part, I think it will not be altogether improper to give my Opinion about the different kinds of *Lattices*, to the end that People may determine at first to pitch upon that which I value most, and indeed, which is the most Noble, and most Convenient.

## C H A P. XVII.

### Of the different manners of Lattices us'd to Pallisade.

*Pole Lattices*  
set up against  
Walls, much  
us'd in France.

FROM the very Moment we resolve to Enclose our Garden with Walls, we certainly design to have Fruit against them, and consequently must prepare whatever is necessary to *Pallisade* the Trees that are to be Planted there, neatly, and Conveniently.

The First Observation I have made in Relation thereto, is, that one cannot be too careful in having the Walls well Pargetted, or Plastered over when it can be done Conveniently; in order to stop all the holes from *Rats*, *Snails*, *Earwigs*, and other Vermin which destroy the Fruits, and commonly attack the Fairest, and best, and thereby continually Plague the Curious.

When the Walls are Pargetted with Plaster, we have the Convenience to Ply, or *Pallisade* the *Branches* with Nails, and Shreds of Sheep's-Skin, or Shamoy, or Lists of Cloth, both about half a finger broad, and a finger long against the said Walls, putting the Stays about the *Branch*, and fixing it upwards with a Nail, we thus form the Figure of our Trees. This manner of *Pallisading* is very agreeable, but tedious; those Shreds may last a year or two, the only thing that can be said against it is, that sometimes *Earwigs* shelter in them in the day time, and come out at Night, to injure and damage the Trees.

Those who are not willing to use those Shreds, have try'd three or four ways of *Pallisading*, some for all manner of Walls, but especially for such as are made of Earth, and Hey, as they do in *Beausse*, and *Normandy*; some fix Spikes from space to space into the Wall, sticking out about two Inches, to fasten Laths, Poles, Perches, or Switches upon them: Others make a *Lattice* of Poles, supported by the Bones of Horses, or Oxen, fix'd into the Wall, to which they fasten the *Branches* of their Trees: Others have abundance of Sheep's feet Bones fix'd into their Walls at a small distance, in a straight Line, and so bind every *Branch* of their Tree to one of the said Feet; some make a *Lattice* of narrow Laths nail'd a cross one another checker-wise, every square consisting of about twelve Inches; and this *Lattice* being made by whole, or half Fathoms, separate, they fix them to the Walls with Nails, or Hooks, that are driven into the joints of the Stones; it is a pretty good Expedient, but neither Gentle, nor Handfom.

Some

Some who yet covet cheapness beyond theft, make a *Lattice* of Brais or Iron Wire, of a moderate size, supported by flat-headed Nails fix'd into the Walls. Others have been satisfy'd with barely fixing straight Lines of this Wire, either longwise, or crosswise: These two last Methods are pretty neat, but not very good; both by reason that they are too weak, inasmuch that the thick *Branches*, that sometimes require to be forc'd, either break, or stretch them; and that this Wire is apt to wound and scratch the young, and consequently tender *Branches*, which occasions Gum to grow upon them, which destroys them; besides, those young Shoots slip too easily behind those Wires, from whence it is not easy to remove them, without spoiling of them.

The best manner of all, the most Convenient, and most Noble, is a *Lattice* of quarter Wood, or Heart of Oak; every Pole or Lath about an Inch square, and as much as can be without knobs, they must be very well plain'd, and notch'd in such places as require it; those that are not plain'd, are coarse, and ugly. I confess that this *Lattice* is chargeable at first, but then it is more lasting, and requires less mending: The square fathom of that *Lattice* amounts constantly to 25, 26, 27, and 28 Pence, for the Wood, Making, Wire and all.

In order to make this *Lattice* as it should be, you must have Iron Hooks made on purpose, they must be square, about a quarter of an Inch thick, and half a Foot long; besides, the end which turns upwards in a straight Angle, which must be above an Inch and a half long, the end which enters into the Wall, must be forked, to hold the latter into the Wall, into which it must enter about four Inches deep, two Inches on the outside will suffice.

Those Hooks cost commonly about a Penny a piece, they must be plac'd at three foot distance, and always Checker-wise, beginning the first Row within a foot of the surface of the Ground, continuing it to the top of the Wall; the rows of those Hooks must lie in a straight Line, and parallel to one another; that is all I have to say about the Hooks.

As to the Poles, or Laths, you may buy them in Shops, of different lengths, viz. Of Four Foot and a half, of Six, Seven, Eight, or Nine; some are made of twelve Foot, but seldom, because it is too difficult to slit such long pieces of Wood; you may take them of what length you please, according to the height of your Walls; they are Sold in Bundles, those of Four Foot and a half, contain Forty, and Cost Eleven Pence, those of Six, Cost Twelve Pence, and contain Five and Twenty; those of Seven, Eight, and Nine; likewise contain Twenty Five, and Cost somewhat more.

The best and most useful way is to make those that stand upwards all of a piece, when you can, but yet you may join two or three, such as you can get, and they are much cheaper; they must be join'd together neatly, plaining and proportioning the Extremities that are to be Marry'd together exactly, tying them afterwards very close with Wire; to which end, you must use small Pinchers made on purpose, with which you may pull the Wire towards you, and turn and wind it until the Ligature be strong enough, then break the end close to the knot, and fasten the said knot against the Laths, lest it should prejudice the Gard'ner, or Branch.

In choosing the Poles, or Laths, take the straightest, and weakest, to serve in a straight Line, by reason that they always appear on the outside; placing the Butt-end downwards, the strongest must be employ'd crosswise to support the Work; the Squares of the *Lattice* must be regularly about 7 or 8 Inches, they do not look well of ten or twelve Inches, and in my Opinion, they are too little of 5 or 6 Inches for *Espaliers*; but they may be employ'd for those kind of Arbors, that are of late in fashion. A good Maker of *Lattices* should never work without a regulated measure in hand for his Checkers, measuring every one of them carefully; he must leave an Inch between the Laths, and the Wall, and when the Hooks are too short, he must make use of a Wooden Wedge, and hold it between the Laths, and the Wall, in order to have more room to pass his Wire.

The *Lattice* must not only appear neatly made to the Eye, it must also be solid, which is easily known by shaking one of the Laths; for it is not as it should be unless it resists the hand.

I must not forget to tell you, that you must use but one straight Lath in Corners, to fasten the two *Lattices* of two Walls that join, two would look clumsily, the one on one side of a Wall, the other, on the other.

The last Perfection of our *Lattice* consists in being painted first with White, and when that is dry, with a fine Mountain Green.

We do not only make *Lattice* frames for Walls, we likewise make them sometimes for a kind of *Counter-Espalier*, or *Pole-Hedges*, which *Lattice* frames may be made four, five, or six foot high, according as you please: In order to its being solid, it is necessary to thicken

Oaken

Oaken Spikes into the Ground, at five or six foot distance from one another, about four Inches square, driving them about a foot deep into the ground, the outward Extremity being pointed, to last the longer, for if it were square, the Rain would Rot it the sooner; as for the size, and the place to fasten the Wire, the Checkers must be like those of the *Espaliers*, with this only difference; that in *Pole-Hedges*, the Poles or Laths must be fix'd with Nails into the Body of the *Spikes*, which must be notch'd in order thereinto.

*The End of the Fifth Part.*

A



## OF FRUIT-GARDENING AND Kitchen-Gardens.

VOL. II. PART VI.

*Of the Culture of Kitchen-Gardens.*

Here's nothing seems less unknown than the *Art of Cultivating Kitchen-Gardens*. It has been universally practis'd in all Ages, and almost in all *Climates* of the World, and the care to bring up and multiply in select places, some *Herbs and Legumes*, or *Edible Plants*, which *Nature* had produced promiscuously in the midst of the wild *Fields*, and which the first Men used for their only Food, has been, and still continues to be the Occupation of a great number of all sorts of People. And indeed, how many do we see, that being weary and tired, either with the fatigues of *War*, or the drudgery of *publick Employments*, or with the idleness of a *City or Court Life*, have chosen to retreat into the *Country*, to go (as our Proverb says) and plant *Cabbages*, and how many others are there, that take an extreme pleasure in entertaining their Friends with *Herbs and Sallers* out of their own *Gardens*, stilly maintaining, that they taste much better than those bought in the *Markets*, and of common Gard'ners? And therefore since *Kitchen-Gardens* have been planted in all times, have I not some reason to fear, it may appear at first, either ridiculous or impertinent for me to subjoyn here a particular Treatise of that sort of *Gardens*.

I answer, that I will not deny but that almost as soon as there were Men upon the Earth, they had some kind of *Kitchen-Gardens*, and that in process of time, the curiosity of their Cultivation has been extremely augmented, and has made mighty advances, and I am far from pretending that the first sowing of *Sallers* and *Roots*, and planting of *Cabbages*, and *Artichokes*, and rearing of *Cucumbers*, *Melons*, &c. begun in our days. No, I know well enough, that our *Ancestours* understood what belonged to the Culture of all those plants, and that the most part of the very *Country-people*, and of the meaner sort of the inhabitants

The Art of Cultivating Kitchen-Gardens and Pot-Herbs, &c. Antient and Universal.

Beatus ille qui  
paulat negotiis, ut  
vixit Cives Mar-  
tium, saltem  
vixit beatus ex-  
ter suis, &c. Hor.  
Ep. d. 2.

Happy the Man  
from toil free,  
Who does regain  
Man's ancient li-  
berty,  
Blowing his  
Ground with  
Oxen of his own,  
By Parent's fi-  
fteen glorious  
Loan

T

tants

tants of *Cities*, have some Tincture of it; nay, and I will ingenuously confess, that the knowledge I have my self in the management of *Kitchen-Gardens*, was chiefly attained by my often conversing with what we vulgarly call, able *Market-Gard'ners*. But I must add withall, that as the *Kitchen-Garden* taken in a general fence, comprehends the Culture of a great number of different sorts of Plants, so there is hardly any Gard'ner that has made it his Business, to be skilful in cultivating generally all the sorts of them; it having ordinarily hapned, that one has applied himself to the care and improvement of one particular part of this culture, which he has performed exactly well, neglecting the rest, whilst another has employed his industry, no less particularly in that which his Neighbour had neglected, and succeeded in it, as much fighting on his side, that other part in which the same Neighbour had so prosperously laboured; the different appetites of Men, but more especially, the different goodness of Soils and Climates, having been the true causes of those different affections in the Cultivation of *Pot or Kitchen-Plants*.

Now it being undoubtedly necessary for a Gentleman's Gard'ner to be able to perform with equal skill and happiness, all the parts of Culture belonging to a *Kitchen-Garden*, that so he alone may be in a condition to furnish his Master with all the variety that a good *Kitchen-Garden* can produce, without wanting at least any of those productions that are of most importance, and it being no less expedient too for the Gentleman himself to know exactly what he may expect from his Gard'ner every Month in the Year, and what is the particular work that is to be done in every Season; I have therefore taken care to omit nothing that is necessary for either of them to be informed in, that the one may be able to give content by knowing how perfectly well to discharge his Duty, and the other be contented, when he knows he has sufficient Reason to be so. In order to which, by way of answer to those, that may ask me what I pretend to say that is new, upon a Subject which I my self confess to be so very well known,

I shall first repeat the same thing which I have already laid down, and inculcated, as my intention in all the parts of this Work, viz. That I write not here for those which are actually Gard'ners by Profession, and that are skilful in it, but for the instruction, as well of those that have a mind to become so, as for Gentlemen that are curious in Gard'ning, being well assured there are a great many of these Latter, though ignorant in the particulars of this Science, that esteem it not unworthy of their Curiosity, and are fully persuaded it is capable of giving them Pleasure as well as Profit, and being no less certain, that I my self found a great deal in pursuing the acquisition of those lights I have attained in it, therefore I cannot but think, it will be sweet and grateful to them to enjoy without Pains, the Fruits of the study I have made therein, and to find out an exact and faithful Collection of all that concerns this matter.

In the second Place, I shall answer, that 'tis my design to cut out a shorter way than the common Roads, for those young Persons who though very desirous of learning the Art of Gard'ning, yet would willingly be intruded by some other means than by bare seeing others Practice, it being a tedious and uncertain way, and had rather be taught by stated Rules and Principles, which, I think may be done in a little time, and by very short and easie methods.

Thirdly, I reply, that I shall set down here some particular experiments which I my self have made with Success, and which seem to me never to have been made before, and I think I may add, that they have been too well approved, not to merit to be divulged.

Lastly, I answer, that my intention is to give such Directions, that the place designed for a *Kitchen-Garden* may be so well ordered in all its parts, that not only each part may perform its duty in respect of its Productions but by the accurate Symmetry and Proportion observ'd in modelling of the whole, it may be in a Condition to allure the Spectators, and at all times to delight the Eyes of the Curious.

And accordingly for these Reasons, I purpose here to follow exactly the Model and Platform I have already delineated and explained at the beginning of these Treatises of Gard'ning, conformably to which, I shall set down,

First, every thing that generally speaking, should be in all sorts of good and well-furnished *Kitchen-Gardens*, to which I shall add a Description of the Seeds and other things which serve for the Production and Multiplication of every particular Plant.

In the second place, I shall specify not only all the things that may be gathered out of a *Kitchen-Garden* every Month of the Year, but also what work Gard'ners are to do in every one of those Months, and to those two heads I will joyn another, viz. a particular account of what should at all times be found in any *Kitchen-Garden* whatsoever, that

so

so we may be able to judge when there is any thing wanting in it, and when not.

Thirdly, I will explain what sort of Earth or Soil, and what sort of Culture are most proper for each sort of plants, to make them excellent; and because some of them are sown to remain always in the same place, and some, only to be transplanted elsewhere, and some again are propagated without Seed; I will give Directions at the same time how to order all of them, as well in respect to the Seasons in which they are to be sown or planted, as the manner of their Propagation.

Fourthly, I will shew how long each sort may profitably occupy its place, and which of them must be laid up in store for our Winter Provision, and which may by the help of Industry be produced in spite of the Frosts.

And fifthly and lastly, I will inform you how long any sort of Seed will last without spoiling, they having not all the same destiny in that Matter.

## CHAP. I.

*What things should be planted in any Kitchen-Garden of a reasonable extent, to render it completely furnished.*

ALL the World is agreed, that there are few days in the whole Year in which we can be well without the assistance of the *Kitchen-Gardens*, whether it be in the fair and fruitful Season, whilst they are still growing on the Earth that first produced them, when we have no more to do but to go and gather them there; or in Winter when we must fetch them out of the Store-rooms, where we had timely laid them up for Security, before the arrival of the bitter cold, which not only makes the Earth unfruitful for a time, but destroys too a great part of those Vegetables which are so unhappy as to be within its reach; and therefore it follows, that every day of the Year, we must be furnished with what we need of this Nature, out of our own Gardens or Stores, or elsewhere, either by the liberality of our Friends, or what is most common from the Markets.

That you may therefore have at one view, the knowledge of what composes this agreeable assistance, that may be drawn out of the *Kitchen-Garden*. I shall here present you with a kind of *Alphabetical Inventory* of all the things that such a Garden should, and may furnish us with, throughout the whole course of the year.

### A.

*A. Lenoir Cresser. Vid. Cresser.*

*Alfange*, a sort of Roman Lettuce.

*Allema*, *Wood-sorrel*, alias *French-Sorrel*, or *Sharp Trefoil*.

*Anis*.

*Artichokes*, both *Green*, *Violet* and *Red*.

*Artichokes*, Coltons, or Slip-suckers.

*Asparagus*.

*Aromarick*; see *Fine Herbs*.

### B.

*B. Alm*, called in *French*, *Melisse*.

*Basil* or *Basilick*, both the *Greater* and the *Lesser*.

*Bays*, the common sorts.

*Hot Beds*, of several sorts, as for *Sallets*, and *Spring-Radishes*, and the first Early *Strawberries*, as for *Musk-melons*, *Cucumbers*, and *Mushrooms*, and for raising some sorts of *Flowers* in the *Winter*, and other Plants to set again in the *naked Earth*, and

for the forcing of *Sorrel* and *Cabbage Lettuce*, &c. to advance.

*Beet-Raves*, or *Red Beets*, to produce *Roots* for *Sallets*.

*White Beets* called *Poirée*, for *Chards*.

*Beans* both of the common sort, and those called *Harico's*, or *French Kidney Beans*; as also *Venetian Beans* called *Fevrolles*.

*Bonne Dame*, or *Good Lady*.

*Borage*.

*Bourdelaie*, or *Verjuice Grape*, both *Red* and *White*.

*Bucks horn Sallets*.

*Bugloss*.

*Burket*, called in *French*, *Pimpernel*.

### C.

*Cabbages* of all sorts.

*Capers* of the Ordinary sort.

*Capucin Capers*, called otherwise *Nustresses*.

*Caprons*, a sort of *Strawberries*.

*Spanish Cardons*.

T 2

Car.

*Carlots.*  
*Celery.*  
*Chalots, vid Shalots, and Eſchalots.*  
*Chards of Artichokes.*  
*Chards of Beets.*  
*Chaffin's Grapes.*  
*Cheril, Musk'd and Ordinary.*  
*Chervi, or Skirrets.*  
*Chicons, the ſame with Alfange.*  
*Ciboules.*  
*Citrulls or Pompions, or Pumpkins.*  
*Cives.*  
*Colſlowers, and Coleworts, both comprehended under Cabbage in French.*  
*Creffes, as Akenis or Garden Creffes.*  
*Cucumbers.*  
*Currans, which with Goſeberries, are both called Groſſeilles in French, and diſtinguiſh'd into the Pricky, the Red, and the Pearled.*

## D.

**D**ragons or Eſtragon, a Sallet.

## E.

**E**ndive, *White* or *Tame*, as well the *Curl'd* as the *Plain*, called in French *Chicorée* or *Succory*, as alſo the *Wild* fort.  
*Eſchalots, vid. Shalots.*  
*Eſtragon or Dragons, a Sallet.*

## F.

**F**ennel.  
*French-Sorrel; ſee Alleluia.*  
*Fennels for Sallets, which with the French, are Spare-mint, called by them Balm, as alſo Eſtragon, or Dragons, Engliſh Cives, Fennil, Chervi, as well the common as the Musk'd ſort, and Baſil, &c.*  
*Fine Herbs, called in Engliſh, Sweet-Herbs, but meant by the French of all beſe ſcented Herbs, as Tine, Marjoram, Lavender, Rhue, Worm-wood, Hyſop, &c. which are planted in Borders.*

## G.

**G**hick.  
*Goſeberries, together with Currans, both confounded, under the name of Groſſeilles in French, and diſtinguiſh'd into the Pricky, the Red, and the Pearled.*  
*Good Lady, vid. Bonne Dame.*

## H.

**H**ſp.

## L.

**L**avender in Borders.  
*Lecky.*

*Lettice of all ſorts, according to the Seaſons, as well to ſow in rows, or ſmall Furrows, to cut when little, as to Cabbage, and to bind up, viz. the Coquille or Shell-Lettuce, alias the Winter, and the Puffin Lettuce, the Curl'd bright Lettuce, and the Green Curl'd Lettuce, the Little Red Lettuce, the Short Lettuce, the Royal Lettuce, the Bellegarde, the Lettuce of Gemma, of Perpignan, and of Aubervilliers, the Imperial, and the Roman Lettuce, which comprehends all the Chicoris, both the Green and Red, otherwiſe called the Alphonſe Lettuce, and they are to tie up.*

## M.

**M**acedonian Paſſy. Vid. Paſſy.  
*Mâches.*

*Mallows and Mayſb-mallows.*  
*Marjoram in Borders.*  
*Melons or Muſk-melons.*  
*Mint, called in French, Ba'm.*  
*Muskat, or Muſk-grapes, both the White, the Black, and the Red.*  
*The Long Muſcat, alias, the Paſſy-Muſquée.*  
*Muſhrooms.*

## N.

**N**aſturties, or Capucin Capers. See Capers.

## O.

**O**nions, both the Red and the White.

## P.

**P**aſſy, as well the Common as the Curl'd.

*Macedonian Paſſy.*  
*Paſſyns.*

*Patience, a ſort of Sorrel. Vid. Sorrel.*  
*Peaſe, from the Mouth of May, which are the Haſtings, till Allhallow-tide.*  
*Paſſy Muſquée. See Muſcats.*  
*Piercepier, a ſort of Stone Paſſy.*  
*Pompions or Pumpkins, called in French, Citrons.*  
*Potirons, a ſort of flat Pumpkin or Pumpkin.*  
*Purſlain, both of the Green, and Golden or Red ſort.*

R. Rd.

## R.

**R**adiſhes, both in Spring, Summer, and Autumn.  
*Raſpberries, both Red and White.*  
*Reſponſes, or Field-Radiſhes.*  
*Rue.*  
*Rocamboles, or Spaniſh Garlick.*  
*Rocket, a kind of Sallet. Furniture.*  
*Roſe-mary.*  
*Rubarb.*

## S.

**S**age.  
*Salfſic, or Goat's-Beard.*  
*Saracens or Turkey Wheat.*  
*Savory.*  
*Scorzonera, or Spaniſh Salfſic.*  
*Sellery. See Celery.*  
*Shalots. See Eſchalots.*  
*Smallage.*  
*Sorrel, both the Great, the Little, and the Round.*  
*Spinage.*  
*Spare-Mint. See Mint.*

## T.

**T**ime for Borders.  
*Tripe-Madam.*  
*Sharp Trefoil, vid. Alleluia.*  
*Turkey or Saracens Wheat.*  
*Turneps.*

## V.

**V**erjuice Grapes, vid. Boirdelatis.  
*Vines.*  
*Violets in Borders.*

## W.

**W**heat. See Turkey and Saracens Wheat.  
*Worm-wood for Borders.*  
*Wood-sorrel. See Alleluia.*

## CHAPTER II.

Containing a Deſcription of the Seeds, and other things which contribute to the production and Multiplication of every ſort of Plant, or Legume.

## A

*Alenois Creffes: See Creffes. Alfange: See Lettuce.*

**A**LLELUIA, or Wood, or French Sorrel, is a ſort of Trefoil, that is multiplied only by Runners or ſlips, which ſprout from the foot of it, as do Violets and Daiſies, &c. It bears a White Flower, but no ſeed.

*Anis*, Is propagated only by ſeed, which is pretty ſmall, and of a yellowiſh Green, and is of a longiſh Oval Figure, Striped: Which Oval is Bunched on one ſide. In a word, it is altogether like Fennel-ſeed.

*Artichokes*, are commonly multiplied only by their *Ocellions* or little *Eyes*, or Off-ſets which are a ſort of Kernals, which grow about the heart of the foot of their plants, that is, in that part that ſeparates the Root from the Eye or bud, out of which the ſtemm grows that produces the *Artichokes*: Theſe little *Eyes* or off-ſets begin commonly to breed at the very end of Autumn, or in Winter, when it is mild, and ſhoot forth their Leaves in the Spring, that is at the end of March, and in the month of April, at which time, we grope about the foot of the *Artichoke*, and ſeparate or ſlip off theſe Suckers or off-ſets, in French called little *Eyes*, and that is called *ſlipping*, or *diſ-Eyeing*.

Theſe off-ſets or suckers to be good, ſhould be White about the heel, and have ſome little roots; thoſe that are black about the heel, are old, and produce but very little *Artichokes* in the ſpring, whereas the others ſtay till Auguſt, September, or October, before they bring theirs to perfection, according to the intention of the Gard'ner.

Sometimes *Artichokes* are multiplied by the ſeed, which grows in the *Artichoke* bottoms, when they are ſuffered to grow old, to flower, and to open, and laſtly to dry, about Midſummer.

When

When we tie them up in *Autumn*, we wrap and cover them up to their whole length, with straw or old dung, and so Whiten the *Cattomy* sides of their leaves, to make *Artichoke* Chards of.

*Asparagus*, or *Sparagas* are propagated only by seeds which is black; a little oval, round on one side, and very flat on the other, about the bigness of a great pin's head, and grows in a shell, or round Cod, which is *Red*, and about the bigness of an ordinary *Pea*; there are four or six seeds in each shell, and those shells grow in *Autumn*, upon the head of those *Asparagus* plants that are a little fairer and stronger than the rest. Sometimes those shells are sown whole, but the best way is to break them, and beat the seeds out of them. The time of sowing them is about the end of *March*.

## B

**B**alm, in *French*, *Melisse*, is multiplied only by Runners and Cuttings.

*Basil*, or *Buslick*, as well the *Great*, as the *Small* sort is multiplied by seed, which is of a blackish cinnamon colour, and very Small and a little oval, and is propagated no other way but that.

The common *Bay*, or *Bays*, is propagated by seeds which are Black, or else by Layers.

*Beans*, as the *Masls* or *Common Beans*, which are pretty thick and long, of an oval figure, round at one end, and flat at the other, with a black list or Cresset pretty thick and broad, of a sullied White colour, having a smoother skin than the *Havicaus*, or *Kidney Beans*, which are likewise long and oval, but narrower, lesser, and thinner than the other, having a black list in the middle of one of the sides of the oval, which is round on one side, and a little bending Inward on the other. The *Feverolles*, or *Venetian Beans*, differ only from these last, in that they are a little less, and are some of them *White*, some *Red*, and some mottled with several Colours; there is one sort of them that is very small. Every body knows, they all grow in Cods.

*Beet-Ravets*, or *Beet-Radishes*, that is, *Red-Beets* to produce Roots for Sallets, are multiplied only by Seeds, which are about the bigness of middling *Peas*, and round, but all gravely in their roundness; they are yellowish, and so like those of the *White Beets*, that they are hardly to be distinguish'd one from the other, so that People are often mistaken, thinking they have sown *Red Ones* for Roots, and see nothing come up but *White Beets*; they are planted apart when designed to run to Seed.

*White Beets*, called *Porée* or *Poirée*, for Chards are also propagated only by Seed, which is like that of the *Red Beets*, only 'tis of a little duller colour: They are replanted to produce Chards.

*Bonne-Dame*, or *Good Lady*, is multiplied only by Seed, which is extremely flat, and thin, and is round and reddish.

*Borage* is propagated only by Seed, which is black, and of a long bunchy Oval Figure, and having commonly a little white end towards the base or bottom, which is quite separated from the rest, the length is all Engraven as 'twere with black streaks from one end to the other.

*Bugloss* is likewise only multiplied by Seed, which is so like that of *Borage*, that they cannot be known a-funder.

*Buckshorn Sallet* is multiplied only by Seed, which is one of the least we have; it is besides that, longish, and of a very dark Cinnamon colour, and grows in a Husk like a Rats Tail.

*Burnet* is propagated only by Seed, which is pretty big, and a little Oval, with four sides, and is all over engraven as 'twere in the spaces between those four sides.

## C.

**C**abbages, called in *French*, *Choux*, and comprehending both *Cabbage*, *Coleworts*, and *Coleflowers* of all kinds, of what Nature soever they be, are multiplied only by Seed, which is about the bigness of an ordinary Pin, or of Birding Powder, and is reddish, inclining to a brown Cinnamon colour.

*Capucin Capers*. See *Nasturties*.

*Caprons*. See *Strawberries*.

*Spanish Cardons* are propagated only by Seed, which is longish, oval, and about the bigness of a fair *Wheat Corn*; it is of a greenish, or Olive colour, mark'd with black streaks from one end to the other, and is Sown from the middle of *April* to the end.

*Carrots*

*Carrots* are multiplied only by Seeds, which are small and oval, the sides of which are wrought with little streaks, or longish points very small; and one side of the flat part of the Seed is a little fuller, and more raised than the other, and both of them are marked long-ways with streaks; they are of the colour of a dead Leaf.

*Celery* is multiplied only by Seed, which is very small, yellowish, and of a longish oval Figure, and a little bunched.

*Chalots*. See *Eschalots*.

*Chards of Artichokes*. See *Artichokes*.

*Chards of Beets*. See *Beets*.

*Chervil* is multiplied only by Seed, which is black, very small, and pretty longish, striped long-ways; it grows upon the Plants that were Sown in the *Autumn* before, and Knits and Ripens in the Month of *June*.

*Musked Chervil* is multiplied likewise only by Seed, which is longish, black, and pretty big.

*Chervil* or *Skirrets* is multiplied only by Seed, which is oval, longish, and pretty small and narrow, streaked from one end to the other, and of the colour of a grayish white dead Leaf, and flat at one end.

*Ciboules*, or small *Onions*, are propagated only by Seed, of the bigness of a corn of ordinary Gun-powder, a little flat on one side, and half round on the other, and yet a little long and oval, and white on the inside; so like to which are the Seeds of both the *Red* and *White Onion*, and of *Leeks*, that it is very hard to distinguish them one from the other: *Ciboules* are Sown in all Seasons.

*Citrulls*, *Pumpions*, or *Pumpkins*, are propagated only by Seeds, which are of a flat oval Figure, and pretty large and whitish, and are as 'twere neatly edged about the sides, excepting only at the bottom, where they luck to the *Citrull* or *Pumpion*, in whose Belly they were formed.

*Cives*, called *English Cives*, are multiplied only by little Off-sets that grow round about their Tufts, which grow very big in time, from which a part of those Off-sets are taken to Replant.

*Coleflowers*. See *Cabbages*.

*Coleworts*. See *Cabbages*.

*Cresset*, called *Albino Cresset*, are multiplied only by Seed, which is of a longish oval figure, small, and of an Orange yellow colour.

*Cucumbers*, or *Coucumberes*, are propagated only by Seed, which is oval, a little pointed at both ends, but a little less at the lower end or bottom than at the other, out of which springs its Bud or Sprout; it is of a middling thickness, of a whitish colour, and is gathered out of the Bellies of those *Cucumbers* that are grown yellow with ripeness.

The *Curran-Bushet*, whose Fruit grows in Bunches, both the *Red*, and the *White*, called *Dutch Currans*; as also *Gooseberry-Bushes*, called in *French*, *Grofeilles*, as well as *Currans*, and named *Picquans*, or *Prickly Grofeilles*, are multiplied as well by slips that are a little Rooted, that Sprout out of the foot of their Stocks every year in the *Spring*, as by simple Cuttings; we also Replant their Stocks of two or three years old.

## D.

**T**he *Dock*, called *Patience*, being a sort of *Sorrel*, is multiplied only by Seed, which is like *Sorrel* Seed, only a little bigger.

*Dragons*, or *Estragon*, a *Sallet*: See *Estragon*.

## E.

**W**hite *Endive*, called in *French*, *Chicorte*, i.e. *Succory*, is multiplied only by Seed, which is longish, and of a whitish grey colour, flat at one end, and roundish at the other, and grows upon the Stocks or Stems of the preceding years growth; one would take it almost for nothing else but little bits of Herb cut pretty small.

*Wild Endive*, or *Succory*, is also propagated only by Seed, which is longish and blackish, and grows as the other doth.

*Eshalots*, or *Shalots*: See *Shalots*.

*Estragon*, or *Dragons*, being a *Sallet*, is multiplied only by Runners, or Cuttings.

## F.

**F**ennel is propagated only by Seed, which is pretty small, longish and oval, bunched, and streaked with greenish grey streaks.

French Sorrel: See *Alleluia*.

## G.

**G**arlick is produced by a kind of Kernels, or Off-sets, which grow in great numbers about its Foot, and make all together a kind of Bulb like an Onion, which Kernels are called the *Cloves* of the Garlick; every *Clove* being concave or hollow on the inside, and convex, or bending outwards on the out-side, having at its lower end, a flat base or bottom, by which it is fastned to the body of the Foot or Stalk, out of which the Roots spring; and having on the top a pointed end, out of which springs its Bud, or Shoot, when it is planted in the Earth in the Months of *March* or *April*, in order to its bringing forth.

Good Lady: See *Bonne Dame*.

Gosberry-Bushes: See *Curran-Bushes*.

## H.

**H**ysop, or *Hysope*, is propagated only by slips.

## L.

**L**avender is multiplied by Seed, and by the old Stocks or Plants replanted.

Laurel, or *Laurel*: See *Bays*.

*Leeks* are multiplied only by Seed, which is altogether like that of *Ciboules*; they are Replanted in the Month of *May*, very deep in the Earth, to make their Stalks and Plants thick and white; and they are Sown in *March* as soon as the Frost will permit; their Seed grows in a kind of thick white Purle, which is round, and grows upon the top of a good long Stalk, and it keeps a pretty long time in that Purle or Hood before it falls.

*Lettuces*, of what sort so ever they be, are multiplied only by Seed, which is of a longish oval figure, streaked long-ways, sharp pointed at the ends, and very small; some are black, as those of *Aubervilliers*, but the most of them are white: when they are Sown in the Spring they run to Seed in the Month of *July* after; but the *Winter Lettuces*, called otherwise *Shell Lettuces*, after having past the Winter in the place where they were Replanted in *October* run up to Seed in the Month of *July* following.

## M.

**M**acedonian Parsly: See *Parsly*.

*Miches*, or *Musches*, are multiplied only by Seed, which is very small, and of an *Orange* colour.

*Mallows*, or *Musko-Mallows*, are propagated only by Seeds, which are like one another in shape, but yet are different as well in colour as in bigness; for the Seed of the *Mallows* is much bigger than that of the *Musko-Mallows*, and that of this latter is of a deeper brown than that of the plain *Mallows*; they are both Triangular, and streaked all over.

*Marjoram* is propagated only by Seed, which is very little, and shaped almost like a *Limon*, more pointed on one side than on the other; it is speckled in some places with little white specks, and is as 'twere streaked with white all over; it is of a pretty light Cinnamon colour.

*Melons*, or *Musk-Melons*, are multiplied by a Seed, which is like that of a *Cucumber*, excepting in colour, which in *Melons* is of a pale red, and is not so broad as that of the others; they are taken out of the Bellies of ripe *Musk-Melons*.

*Mint*, or *Spare-Mint*, called in *French*, *Balm*, is multiplied only by Runners that are like so many Arms that spring out of its *Tufts*, and take Root; it likewise is propagated by Cuttings, but bears no Seed.

*Muscats*: See *Vines*.

N. Na.

## N.

**N**asturces, commonly called *Capucin Capers*, are multiplied only by Seed, which is a kind of *Pea* or *Haricot*, or *French-Bean*, which climbs and gets up upon Branches or Poles which are near it; the Leaf of it is pretty large, and the flower, of an *Orange* colour; the figure of the Seed is a little Pyramidal, divided by Ribs, having all its superficies engraven, and wrought all over, being of a grey colour, inclining to a light Cinnamon: They are Sown in hot Beds about the end of *March*, or the beginning of *April*, and afterwards they are Replanted by some Wall well exposed. The Seed easily falls as soon as ever 'tis Ripe, as doth that of *Borage*, and the *Belles de Nuit*, or *Night Fair Ones*; and therefore they must be carefully gathered.

## O.

**O**nions, as well the *White*, as the *Red*, are multiplied only by Seed, which as I have already said, is like that of *Ciboules*.

## P.

**P**arsly, as well the *Common*, as the *Curled sort*, is multiplied only by Seed, which is little and very small, and of a greenish grey colour, and a little bending inward on one side, and all over streaked with little rising streaks from one end to the other.

*Macedonian Parsly* or *Alisanders* is also propagated only by Seed, which is pretty big and oval, and a little more full and swelling on one side than on the other, which bends a little inward, streaked throughout its whole length; and is also streaked a cross on the edges between the sides.

*Passe-pierre*: See *Pierce-Pierre*.

*Parsnips* are multiplied only by Seed, which is flat, and of a round figure, a little oval, and as if it were hemmed or edged, streaked throughout its length, and is of the colour of a brownish Straw.

*Patience*: See *Dock*.

*Passe-Musquee*: See *Muscats*, and *Vines*.

*Peas*, or *Peashe*, are multiplied only by Seed; there are *great Ones*, *little Ones*, *white Ones* or *yellow Ones*, and *green Ones*. All the world knows they grow in Cods, and are almost round, and sometimes half flat.

*Pierce-Pierre* vulgarly called *Passe-Pierre*, i. e. *Pasi*, or *Pierce Stone*, being a kind of *Stone-Parsly*, is multiplied only by Seed, which is more long than round, pretty big, of a greenish grey colour, striped on the Back and Belly, and resembling a Lute in shape.

*Pimpernell*: See *Bunnet*.

*Pompions*, or *Pumpkins*, or *Pumkins*: See *Citrull*.

*Potirons*, a sort of Flat *Citrull*, or *Pumpions*, are multiplied only by Seed, which is altogether like that of the *Common Citrull*, or *Pumpion*, and grows in the same manner.

*Purslain*, as well of the *Green*, as *Red*, or *Golden sort*, is multiplied only by Seed, which is black, and extraordinary small, and of a half flat roundish figure. To have a good Crop of this Seed, the *Purslain* Plants must be Replanted at the end of *May*, at a full Foot distance one from the other: The Seed grows in little Husks or Shells, each of which contain a great many, and when we are to gather it, we cut off all the heads of the Stalks, and lay them to dry a little in the Sun, and then we beat the Seed out, and Fan, or Screen it.

## R.

**R**adishes are multiplied by Seed, which is round, pretty thick, and of a reddish Cinnamon colour; it grows in a kind of little Cods, which they call *Coque-Signes* in *Provence*.

*Raspberries*, both *Red* and *White*, are propagated only by slips that sprout out of their stocks every year in the Spring time, and are lit to Replant the next Spring after.

*Reponces*, or *Field Radishes*, are multiplied only by Seed, and are a sort of little *Radishes* that are eaten in *Sallars*, and grow without any pains in the Fields.

*Recanboles*, are a sort of mild *Garlick*, otherwise called *Spanish Garlick*, which is multiplied both by Cloves, and by Seed, which latter is about the bigness of ordinary *Peas*.

## V.

*Rockets*,

*Rocket*, being one of the *Sallat Furnitures*, is multiplied by Seed, which is extreme little, and of a Cinnamon, or dark Tan colour.

*Refenary* is a little very odoriferous Shrub, that is propagated by Seed or Branches that have some portion of Root.

*Rubarb* is propagated only by Seed, which is pretty big, and triangular, the three Angles being as thin as very thin Paper, and there being a thickness in the middle where the Bud or Shoot is.

*Rue* is multiplied by Seed, whose shape resembles that of a *Cocks Stone*; it is of a black colour and rugged; but yet we usually propagate it rather by its Layers and Cuttings, than by its Seed.

## S.

*Sage* is multiplied only by a kind of hooked Slips that have a little Root.

*Saffie*, or *Goats-Beard*, the common sort is multiplied only by Seed, which is almost like in all things to that of *Scorzenera*, except in its colour, which is a little greyer; it is of a very long oval figure, as if it were so many little Cods all over streaked, and as 'twere engraven in the spaces between the streaks, which are pretty sharp pointed towards the ends.

*Sampfire* or *Sampire*: See *Pierce-pierre*.

*Saracens Wheat*, or *Turky Wheat*, is a dark red Seed or Grain, about the bigness of an ordinary *Pea*, very smooth, round on one side, and a little flat on the other, where it is fastned to its Spike or Ear.

*Savory* is multiplied only by Seed, which is extraordinary small and round, slick, and grey.

*Scorzenera*, or *Spanish Saffie*, is propagated only by Seed, which is small, longish and round withal, and of a white colour, and grows in a kind of Ball, mounted on the top of the Stalk of the Plant, having its point garnished with a kind of Beard like that of *Pissabeds*, or *Dandelions*.

*Sellery*: See *Cellery*.

*Schalots* or *Eschalots*, are multiplied by Off-Sets or Kernels, which grow about the foot of its Plant, and are about the bigness of a Filberd Nut.

*Smallage* is multiplied only by Seed which is reddish, and pretty big, of a roundish oval Figure, a little more full and rising on one side, than on the other, and is streaked from one end to the other.

*Sorrel*, as well the *Lesser* one which is the common sort, as the *Greater* one, are both multiplied only by Seed, which is very small, slick, and of a Triangular Oval Figure, the ends of it being sharp and pointed, and being of an excellent dark Cinnamon Colour.

*Round Sorrel*, is propagated only by Slips or Runners, so that out of one Tuft, we may easily make several plants of it.

*French* or *Wood-Sorrel*: See *Alleluia*.

*Spare-Mint*: See *Mint*.

*Spinnage* is multiplied only by Seed, which is pretty big, and horned, or Triangular on two Sides, having its corners very sharp pointed and prickly, and the other part which is opposite to those pointed Horns, is like a Purle, of a Grayish colour.

*Straw-berry Plants*, as well the white as the red, and those called *Caprons*, are propagated only by Runners, which are produced by a kind of Threads or Strings, which springing out of the body of the Plant, and creeping along upon the Earth, easily enough take Root, at certain Joyns or Knots about a foot distance one from the other, which knots coming to take Root, make new Plants, that in two or three Months time, are fit to be transplanted, and they are placed three or four of them together, to make what we call a Tuft.

*Succory*: See *Endive*.

*Suckers* of *Artichokes*: See *Artichokes*.

*Sharp Trefoil*: See *Alleluia*.

## T.

*Time* is multiplied by Seed, which is very small, and sometimes we separate those Plants or Stems of it that produce several rooted Slips or Suckers, to replant them in Botders, for *Time* is seldom planted otherwise.

*Tripe*

*Tripe Madam* is propagated both by Seed, and Cuttings or Slips, every Stem or Stock of it producing several Arms, which being leparated and replanted, easily take Root again. The Seed of it is Gray, and Longish, and almost of the shape of *Pasty Seed*; there grows a great deal of it upon every Seed Stalk, which runs up one above another, like those of *Seed-Carrots*, *Parsnips*, &c. there are seven or eight of them in a sort of little open Cup, where they grow ripe after the falling of a yellow Flower, inclining to an Olive colour.

*Turkey Wheat*: See *Saracens Wheat*.

*Sharp Trefoil*: See *Alleluia*.

*Turneps* are multiplied only by Seed, which is almost like that of *Cabbage*.

## V.

*Vines* of what sort soever they be, whether *White*, *Red*, or *Black Muskat Chassela's*, *Bourdela's*, *Corinthian*, or *Long Muscat*, called otherwise *Passe-Musque*, &c. are multiplied by Layers, by hooked or bent Slips, and especially Couched; and lastly, by *Grafting Cleft-wise*.

*Violet Plants*, as well of the *Double* as *Single* sort, and of what colour soever they be, though they produce Seed in little reddish Shells or Husks, yet are multiplied only by the Slips they produce, each Plant or Stock of them growing insensibly into a great Tuft, which is divided into several little ones, which being replanted, grow in time big enough to be likewise divided into others.

## W.

*Wheat*: See *Saracens* and *Turkey Wheat*.

*Worm-wood*, is multiplied by Seed, which is of a pretty odd Figure, being a little bent inward in its smallest part, and a little open on the other end, which is bigger and rounder, and upon which there is a little black spot. Its colour is yellowish at the bigger end, and its sharper end inclines a little to black. Its Seed is seldom used, because it is very difficult to fan or sift, being very light, and therefore when we have need of propagating *Worm-wood*, we make use rather of its Cuttings and Layers, that are a little rooted.

*Wood-Sorrel*: See *Alleluia*.

## C H A P. III.

*Shews what a good Kitchen-Garden may yield us every Month in the Year, and how a Gard'ner may and ought to employ himself there in every one of those Months.*

**T**He Experience of hot Countries sufficiently convinces us, that the *Earth* taken in general, is capable at all Seasons, to produce all manner of things, without any extraordinary assistance of *Art*, because in those parts, there is no Season in the Year, in which she is not teeming, but by a contrary experience we find, that our *Climate* is too cold to afford us any such fertility; and yet because there are few days, in which a Man has not occasion to make up a part of his nourishment and subsistence with something of the growth of his Garden; It concerns the indoltrious Gard'ners so to manage it, that it may not only produce enough amply to suffice for our daily use, during the five or six Months in which the *Earth* acts at her Ease, by the favour of the *Sun's* Neighbourhood, but also furnish us at the same time, a sufficient Provision for those five or six Months in which she is suspended from her ordinary functions.

Now among the Barren and less happy Months that commonly make the greatest opposition to our Culture, are reckoned the last fifteen days of *November*, all *December*, and *January*, and the first fifteen days of *February*; the violence of the Frosts which in that Season use to harden and cool the *Earth*, and the abundance of Snow with which it is then wont to be covered, putting such a perfect stop to all Vegetative Operations, that the most fertile Soil becomes at that time altogether like that which never was blessed with that accomplishment.

V 2

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But notwithstanding all those hindrances, there is still work enough to be done in *Winter*, to keep us from being quite idle, and a great deal of Assistance too to be drawn from our Gardens, even in that Season, that we may not labour under too great a scarcity of their Productions; and therefore I have determined to give you a particular account of every one of those works, and of every one of those Commodities which our Gardens will afford us, during every one of the twelve Months of the Year, and shall begin with that which, because it passes for the first, and opens and begins the Year, seems to me best to deserve the preference.

### Works which may be done in a Kitchen-Garden, in the Month of January.

**T**O Prune all sorts of Trees, whether *Dwarfs* or *Wall-Trees*, to prepare some of them to plant as soon as ever the Ground shall be open after the hard Frosts, and the melting of the Snow that covered it.

To make Trenches, to plant Trees, to dig Molds to amend them; to dig round the Feet, either of Trees over Luxuriant, to cut off their thick Roots; and by that means to make them fruitful, or of such as are infirm, to trim and redress them.

To make *Hot Beds*, to sow forward *Cucumbers*, and *Sallets* in, whether in Rows or little Furrows, or under Belts. To make Screens to cover those Seeds in case of need: The first *hot Beds* for *Cucumbers*, as also for *Musk-melons*, are usually made at the very beginning of the Month, and at the same time we may make *hot Beds* for *Mustrooms*.

To heat or force *Asparagus*.

To heat *Beds* of *Sorrel*, *Patience*, *Borage*, &c.

To raise on *hot Beds*, *Jacinths*, *Narcissus*, of *Constantinople*, and some *Tulips*, &c.

To make Trails, Trellises, or Frames for *Wall-trees*.

To pull down the *hot Beds* of the last Year, and to take the rotten Dung that composed them, and lay it upon those Grounds we would amend, or Meliorate.

To lay apart some Molds to have them at Hand, to prepare for the *hot Beds*, and we may also clear and cleanse the places of the *Hot Beds*, in order to the making of new ones.

To tie up with Bands of Straw, the tops of the Leaves of *Long Lettuce*, which have not Cabbaged, to make them Cabbage, or at least to whiten them, when they are grown big enough for it.

To raise some *Strawberries* upon *hot Beds*, to have some ripe in the Months of *April* and *May*.

To dung *Figg-trees*, in order to have early *Figs*.

And in fine, to advance the doing by little and little, all that the Spring Season is wont to do with an extraordinary Expedition.

To plant Trees in Baskets, to Pot, and Case *Figg-trees*, to lay *Vine* and *Fig-tree* Branches, to clear your Trees of Moss, if troubled with it, which is done best in rainy weather, with the back of a Knife, or some such instrument.

But it would be to little Purpose to know what to do, without being informed how to do it, and therefore for your instruction in pruning, I refer you to my fourth Book, which treating thoroughly of that Subject, may excuse me from speaking any more of it here.

And as to the way of making *hot Beds*, you must first know, they are to be made only with *Long Horse-Dung*, or *Mule-Dung*, which is to be either all New, or mixed with a third part as most of Old, provided it be dry, and not rotten, for that which is rotten, is not at all proper for making *hot Beds*, no more than the Dung of *Oxen*, *Cows*, *Hogs*, &c. as well, because it has little or no heat, as because ordinarily those kinds of rotten Dung are accompanied with an unpleasant smell that infects the Plants raised upon such *Beds*, and gives them an ugly Taste.

By *New Long Dung*, is to be understood, that which is taken from under the *Horses*, and has served them for Litter but one Night or two at most.

By *Long old Dung*, is meant that which has been piled up ever since it was new, in a dry place where it has lain all Summer, to be ready to be used, either to make Coverings for *Fig-trees*, *Artichokes*, *Endive*, &c. against the *Winter* Cold, or to make *hot Beds* after the ordinary manner, which is thus performed.

After

After we have mark'd and proportioned out the place where the *Bed* is to be, and mark'd out likewise with a Cord, or with Stakes, of what breadth it must be, there must be brought a Rank of Baskets full of *Long Dung*, one at the tail of the other, beginning the Rank or Row where the *Bed* is to end; which done, the Gard'ner begins to work where the Rank of Baskets ends, that so the *Dung* not being intangled with any thing lying upon it, may more easily and handfully be wrought into the *Bed*. Then the Gard'ner takes up this *Dung* with a Fork, and if he be any thing handy, places it so neatly and tightly in laying every layer of his *Bed*, that all the straw ends of the *Dung*, are turned inwards, and what remains, serves to make a kind of back or fence on the out-side. The first layer being thus compleated exactly to the breadth that is marked out, which is commonly of about four foot, and to such a length as is thought fit, the Gard'ner proceeds to lay the second, third, &c. beating them with the back of his Fork, or else treading them with his Feet, to see if there be any defect, because the *Bed* must be equally flut every where, so that no one part may be less strong of *Dung* than another, which being done, he continues it to the designed length, proportioning it still by Layers, till the *Bed* reach the length, breadth, and height it should have, which height is of between two and three foot when 'tis first made, and sinks a full foot lower when it is settled.

Now as to the intention of these *Hot Beds*, some of them are designed for the raising, or forwarding of some plants which our Climate is not capable naturally of producing in the naked Ground, as for example, for the raising of *Radishes*, little *Sallets*, *Strawberries*, *Cucumbers*, *Musk-Melons*, &c. and the better to compass those ends, we make *Hot Beds* during the Months of *November*, *December*, *January*, *February*, *March* and *April*. These *Beds* must be covered over with a certain quantity of small fine mold, as we shall afterward Direct, and must have heat enough to communicate to that mold, and to the plants that are nourished by it; And therefore those *Hot Beds* that are an Invention of Gard'ners against the Cold, which is the cruel Enemy of *Vegetation*, must be well made.

In the second place, there are other *Beds* which are to serve for *Mustrooms*, in all the seasons of the Year, and such may be made every Month, though they act not till about three Months after they are made; and that is, when all their great heat being quite spent, they are grown mouldy within; this sort of *Beds* are made in a new and sandy Ground, in which is first made a Trench of about six Inches deep, then we cover them with a layer of about two or three Inches thick of the same Earth; they are raised in the form of an *Affers back*, and over the covering of Earth, we lay another of five or six Inches thick of *Long Dry Dung*, which serves in *Winter*, to shelter the *Mustrooms* from the Frost, which destroys them: and in *Summer*, from the great heat that broils them, and likewise to prevent the mischievous effects of the same excessive heat, we further take care gently to water these *Mustroom Beds* twice or thrice a week.

As for the breadth of *Hot Beds*, it should be in all sorts of them, of about four foot, and their height must be of between two and three when they are first made, because they sink afterwards a full foot, when once the great heat of the *Bed* is past; As for the length that is to be regulated by the quantity of *Dung* we have to make them with, so that according to that, we make them of several lengths; But in height and breadth, all *Beds* should be as near as may be, alike proportioned.

The difference which there is in other respects, between *Hot Beds* that are to produce plants by their heat, and those which are designed for *Mustrooms*, consists first in that those of the first sort need not be sunk down within the Earth like the others, which are usually sunk about half a foot, unless they be designed for such *Beds* as we call *Deaf Beds*, that is to say, *Beds* sunk so over Head and Ears into the Earth, that when filled up, they exceed not the superficies of the rest of the Ground about them, in height. In the second place, this difference consists, in that those of the first sort must be flat and even above, whereas these others must be raised in form of an *Affers Back*.

Lastly, it consists in that those of the first sort must be Laden with a pretty good quantity of very small mold, as soon as they are made, whereas there must be but a very little mold laid upon the others; That mold by its weight, makes the *Beds* heat, and settle the sooner. We lay upon them sometimes more, and sometimes less mold; as for Example, we throw on to the quantity of six or seven Inches thick, if it be to sow ordinary plants in, as *Sallets*, or *Musk Melons*, or *Cucumbers*, or to plant *Cabbage Lettuce*, and *Asparagus* to be advanced by heat; and to the depth of a foot, if we be to sow *Radishes*, and to replant *Sorrel*, and *Musk Melons*, and pots of *Straw-berries*, &c.

But

But before we sow or replant any thing whatsoever upon any new made *Hot Beds*, the first precaution we must observe, is, to stay six or seven days, and sometimes ten or twelve, to give the *Bed* time first to heat, and afterwards to give time to that heat which is very violent, to abate considerably; This abatement appears when the whole *Bed* is sunk, and when thrusting down our hand into the mold, we perceive in it but a moderate heat. Then it is we are to begin handfully to shape out and adjust the mold, for which purpose the Gard'ner, makes use of a board of a foot broad, which he places upon the sides of the *Bed* about two Inches from the Edge, and joining close to the mold, and having thus placed it, he endeavours to keep it firm and tight, as well with his left hand and Knee, as with the strength of his whole Body, and then with his right hand, he begins at one end, to press down the mold against the board, so hard, till he bring it to [so firm] a consistence, that how light and loose soever it were before of its own Nature, yet it may be able to keep up itself alone, when the board is taken away, as well as if it were a solid body. When the mold is thus adjusted to the whole length of the board, then he removes the board to another place, and so continues till he has performed the same operation on all sides of the *Bed*. And if the board be a little longer, and consequently a little more unwieldy than ordinary, then there must two or three persons join together to work in the same manner, and at the same time, to adjust this mold; or if the Gard'ner be all alone, he must keep the board tight with some Pins, fastned in the sides of the Dung *Bed* already adjusted; And when the thing is done, the mold should have at least a full half foot extent less on every side, than the lower part of the *Bed*, and in its oblong square figure, appear as even as if it were a *Bed* formed on the plain Ground; After which, the *Beds* are to be employed for those occasions that first obliged us to make them. All things in them would either perish, or be much endamaged, if we sowed or planted in them sooner, or if we should delay our doing it any longer. The heat of the *Bed*, may last in a condition to be able to perform well its effects for about ten or twelve days after it is sown or planted, but when that time is past, if we perceive the *Bed* to be too much cooled, we must renew the heat with some good new long dung, or fresh warm litter applied round about it, both to recruit the heat, and to maintain it afterwards in that good temper in which it should be, and in which it was before, when we begun to sow and plant there; so that the plants instead of wasting away or perishing there, may increase and thrive visibly as they should do. It is not so very needful to tell you, that when a man has two *Beds* next one another, one recruiting of heat will serve for them both, because there's no body but knows it, but it is good to know, that this recruiting of heat between two *Beds*, should not be by a great deal so strong as when there is but one; for the ordinary Interval or space left between two *Beds* for the path, being about the breadth of one full foot, a little Dung will suffice to fill it up, and that new heat is reciprocally maintained in its vigour by the Neighbour-hood of the two *Beds*, that border on each side upon it; But when there is but one *Bed*, our addition of Dung for a new heat, must be at least two foot broad, all along the whole length of the *Bed*, and to its full height, and many times it must be higher than that.

When we are to renew the heat, it is not always necessary to make an application of new Dung, it being many times sufficient to stir that the bottom upwards, which we last applied, and which needs it, provided it be not too much rotted, which stirring of it is enough to renew the heat for eight or ten days longer; and there is no need of applying new Dung but when by the rotting of all the last, or of at least a good part of it, we find it to be no longer fit to yield that heat which is necessary for those plants that are raised on *Hot Beds*.

If they be *Asparagus*, or *Straw-berries* which we have taken out of their *Cold Beds*, and replanted in *Hot ones*, and there be any apprehension of the Cold, we must carefully cover them with *Glass Bells*, or *Chasses* or *Glassed Frames*; and to hinder the Frost from penetrating even them, and spoiling what is underneath them, we use besides to cover them with Screens of dry Long Dung, or Litter, or *Straw*, which we put over the *Glass Bells* or *Glassed Frames*, and plants never fail to produce upon *Beds* thus accommodated and maintained in a due heat, by such recruitings Renewed from time to time.

This manner of proceeding is good and commodious enough for *Sorrel*; because being animated by the moderate heat of the *Hot Bed*, it springs up there for some fifteen days time, just as that do's that grows in the naked Ground in the Month of *May*, and afterwards dies; But it is not so good for *Asparagus*, because they when they are pull'd

up

up and Replanted, never produce such fine Shoots, as when they are Dugged and heat on the naked Earth.

It follows then, that the best method for *Asparagus*, and even for *Sorrel* too, is to take up for about two foot deep, all the Earth in the paths between two cold *Beds*, (which paths should be a full foot broad) and fill them up afterwards with Long *Warm Dung*, to heat the neighbouring Earth, and if it be for *Asparagus*, to cover the whole Cold *Bed* with the same Dung, to help to warm the Earth; And when the *Asparagus* begin to sprout, we put *Bells* upon each plant, or else cover the whole *Bed* with *Glassed Frames*; after which, the heat of these paths must be renewed by stirring them the bottom upwards, or by renewing from time to time an application of fresh Dung, covering besides the *Bells* or *Glass Frames* with dry long Dung, or Screens of *Straw*, or such like matter, for the reasons above expressed, when we were treating of *Asparagus* and *Sorrel* in *Hot Beds*. The *Asparagus* plants being thus warmed, and feeding under those *Bells* or *Glass Frames* an Air as comfortable as in the Months of *April* or *May*, they produce shoots that are Red at first coming up, but which afterward turn green and long, like those that Nature it self produces in warm and temperate seasons. The only inconvenience of these Artificial heatings is, that because they must be very violent to penetrate a Cold Earth, they dry up and spoil those plants, so that such *Asparagus*, instead of continuing for fifteen years together, to bear well as otherwise they do, never spring kindly afterward, and though they be let alone two or three years after a first heating, yet at last, are able to endure but one more.

The *Straw-berries* which are forced on *Hot Beds* begin to put out their shoots in *January*, and in *February* and *March*, and yield their Fruit in *April* and *May*. The best method of raising them, is to pot them in *September*, in a tolerable good and light Earth, and afterwards to plant them in *Hot Beds* in *December*; they may also be planted in *Hot Beds* without potting at all, in the Month of *March*; their runners and some of their leaves must be taken off, if they have too many; the Earth in their Pots must be kept always loose and a little moist, and if there happen any excessive heats in some days of *March* and *April*, they must have a little Air given them towards the North, and they must be covered a Nights.

To have little *Sallets* of *Lettuce* to cut, mixed with *Chervil*, *Cressets*, &c. with the furnitures of *Mint*, *Taragon*, &c. and to have *Radishes*, &c. we make such *Hot Beds* as I have directed, and we steep in water about twenty four hours, a little bagg of *Lettuce* Seed, after which time, we take it out, and hang it in a chimney corner, or in some other place where the Frost can't reach it, and the Seed so wetted, drains it self from the water, and heats to such a measure, that it sprouts, and then after we have made upon our *Hot Beds* some little furrows of about two Inches deep, and about as broad, with a little stick that we draw hard over the mold, we sow that sprouted Seed in those furrows, so thick that it covers all the bottom of the furrows; There must be a *French Bushel* to sow a *Bed* of fourteen *Toises* or *Fathoms* long, and of four foot broad, and when 'tis sown, we cover it with a little mold cast upon it lightly with the hand; and each cast of the hand dextrously performed, should cover a furrow as much as it needs, which done, we put some *Bells* or long *Rice Straw* over them to hinder the Birds from Eating them, and the heat from evaporating, or the Frost by chilling it, from destroying the Seed, we take away the *Straw* when at the end of five or six days, the Seed begins to spring well, and at length, ten or twelve days after it is commonly high enough to be cut with a Knife, and eaten in *Sallets*, that is to be understood, if the Ice and Snow, and even the heat of the *Bed* be not too excessive. We take the same course with *Chervil*, and *Cressets*, save only that they must be sown without steeping their Seeds.

As for *Mint*, *Taragon*, *Cives*, and other *Furnitures* of *Sallets*, they are planted on the *Hot Bed* in the same manner as on the Cold one.

As for *Radishes*, we seldom steep them to make them sprout, the skins of their Seeds being so tender, that in less than a days time, they would be melted all to a Pap.

I have directed how to sow *Radishes*, in the Works of *November*, where we treat of preparing the provisions we would have from our Gardens in *January*, *February*, and *March*.

It is convenient to sow in the beginning of this Month, or even in *November*, and *December*, a *Hot Bed* of *Parley* to supply us with fresh, in the Spring time to serve us till that we should sow in the naked Earth, at the end of *February*, be grown to its perfection.

\* A French Bushel is 20 Pound weight, or near a peck and half English.

To

To lay the branches or slips of *Vines*, *Fig-Trees*, *Goose-berry* and *Curran Bushes*, to take Root, we need only Couch, or lay down their branches into the Earth and cover them in the middle with Earth, to the height of five or six Inches, which are to remain in that condition, till the month of *November* following, when having taken Root, we take them up, that is, separate them from the Tree, and plant them where we have occasion for them.

To *Circumfese* Trees by planting them in *Baskets*, *Pots*, and *Boxes*, or *Cases*, we first fill half way with Earth those *Baskets*, *Pots*, or *Boxes*, and then having pruned and trim'd the Trees as I have directed in the Treatise of Plantations, we Plant them, plunging the *Baskets* and *Pots* quite into the Earth, but leaving the *Boxes* or *Cases* above Ground.

The way of potting the *Bulbous* Roots of *Tuberosefs*, *Juncuills*, *Narcissus* of *Constantinople*, *Jacynth*, &c. is first to put them into *Pots*, and then to plunge those *Pots* into *Hot Beds*, covering the *Beds* carefully with *Glass Frames*, *Bells*, *Straw Screens*, &c.

To warm or force *Fig-Trees*, we must have some in *Boxes* or *Cases*, and make for them in *January*, a *Deaf Hot Bed* (being a *Hot Bed* made in a hollow dug into the Earth, and raised only even with its surface) and place the *Boxes* upon it. Then we must have some square *Glass Frames* about six or seven foot high, which must be fitted purposely to be applied against a *Wall* exposed to a *Southern Aspect*: And so the *Dung* in the *Hot Bed* fermenting into a heat, warms the Earth in the *Box*, and by consequence, makes the *Fig-Tree* sprout; That *Bed* is to be put into a new ferment when there is occasion, and great care must be taken to cover those *Glass Frames* close, that no *Cold* may get within them.

During the whole Month of *January* we continue to sow upon *Hot Beds*, under *Bells*, *Lettuces* to be Replanted again as I have directed in the Works of *December*; as also to Replant them under *Bells*, as well to serve for the *Nursery*, as in the places they are designed for, and as to the Seeds when sown, we may let alone covering them with mold, if we please, it being enough to pat with the flat of our hands upon the *Bed*, to press the mold close about them; we use the same method with *Purslain* sown under *Bells*, for we can hardly throw so little mold upon those Seeds to cover them, but we shall through too much.

To have some fine little *Lettuces* for *Salleting*, we must sow under *Bells* some of the *Bright curled* sort, and sow it thin, and stay till it has shot forth two leaves before we gather it. The Seeds of these *Lettuces* must be sown thin, that the Plants may grow tall, and if we see them come up too thick, we must thin them; the choicest sorts of *Lettuce* for the *Spring* season, are the *Curled Fair* or *Bright Lettuce*, and after that, the *Royal Lettuce*, the *Short Lettuce*, and above all, the *Shell Lettuce*, &c. We also sow under *Bells*, to Replant again, *Borage*, *Bugloss*, and *Arach*, or *Orange*.

The right method of making *Trenches*, and digging of molds, is not as was heretofore practised, first, to throw out of those *Trenches* all the Earth, and then to throw it in again; for that was unprofitably to handle the same Earth twice, and so to lose time, and spend money to no purpose.

The best way to do it then, is to make at first a *Gage* full as broad as the *Trench* and of the length of a *Toise* or *Fathom*, and to throw up upon the bordering *Alley*, all the Earth that is taken out of that *Gage*, which will be all the Earth we shall need handle twice, because at the end of the *Trench* there will remain one *Gage*, empty, which must be filled up with the Earth that came out of the first, when the first *Gage* is made, we must fill it up with the Earth that is to be dug up to make the next, throwing that part of it into the bottom which was at the *Superficies*, and making a new *Superficies* of that which was at the bottom; This kind of moving the Ground, makes a natural Slope before the Workman, and in case the Soil must be Dunged, we must have *Dung* ready placed all along the side of the *Trench*, and whilst two or three men are at Work in turning up the Earth, and throwing it before them, there must be one at the side of the *Trench*, to scatter *Dung* upon that Slope by which means the mold is well mixed, and not at all trampled on, as it is by common Gard'ners, that first lay a layer of *Dung*, and then a layer of Earth, and afterwards dig the whole over again, continuing this way of laying of layers of *Dung* and mold, and to turn up one over another, till their *Trench* be quite filled up as 'tis to remain.

Works

## Works to be done in February.

IN this Month, we continue the same works we were doing in the last, if we have had the foresight and convenience to begin them then, or else at least we set upon beginning them now in earnest.

Therefore we set to manuring the Ground if the *Frost* permits us, and about the end of the Month, or rather towards *Mid-March*, or later, that is towards *Mid-April*, we sow in the naked Ground those things that are long a rearing; as for Example, all sorts of Roots, viz. *Carrots*, *Parsnips*, *Chervils* or *Skirrets*, *Beet-Roots*, or *Red-Beet-Roots*, *Scorzoner*, and above all, *Parsly-Roots*.

We sow now also *Onions*, *Leeks*, *Ciboules*, *Sorrel*, *Hasting Peas*, *Garden* or *Marsh-Beans*, *Wild Endive*, or *Succory*, and *Burnet*.

If we have any *Shell-Lettuces* that were sown in *Autumn* last, in some well sheltered place, we now replant them on *Hot Beds* under *Bells*, to make them *Cabbage* betimes. And particularly we take care to replant on them some of the *Curled Bright Lettuces*, which we sowed last Month, because they turn to better account than the others.

We begin at the latter end of the Month, to sow a little green *Purslain* under *Bells*, the *Red*, or *Golden* sort being too delicate and tender to be sown before *March*.

We replant *Cucumbers* and *Musk-melons*, if we have any big enough, and that upon a *Hot Bed*, in some place well sheltered, either by *Walls*, *Straw* or *Reed Hedges*, or some other Invention to keep off the *Wind*.

We also sow towards the end of the Month, our *Annual Flowers*, in order to replant them again at the latter end of *April*, and the beginning of *May*.

We also sow our first *Cabbages*, if as we should, we have not a provision of some in a *Nursery* under some good shelter, which we should have sown at the beginning of *August*, and replanted in *October* in the *Nursery*; we replant these latter in the places they are designed for, taking care not to replant any that begins to run to Seed.

We begin to Graft all sorts of Trees in the *Cleft*, and we prune and plant them; we plant also *Vines*, and about *Mid-February*, if the weather be any thing fair, is the proper time to begin all sorts of Works.

We only make now the *Hot Beds* which we have occasion to make use of for *Radishes*, little *Sallets*, and to raise those things which we are to replant again in the *Cold Beds*.

We take care to maintain the necessary heat about our *Asparagus*, and to gather those that are good.

As also to maintain the Heat in the *hot Strawberry Beds*.

We unvail our *Wall-trees* in order to prune them the more commodiously, and then nail them up anew.

At what time soever *Radishes* are gathered, they must be tied up in Bunches, and put to steep in Water, or else they will wither, and retain too biting a taste.

We also continue to plant Trees when the Weather and the Soil will permit us.

## Works to be done in March.

AT the beginning of this Month, it appears who are the Gard'ners that have been idle, by their not furnishing us with any thing which the diligent and skilful ones supply us with, and by their having neglected to sow their Grounds which lie for the most part as yet unsown, though the weather has been favourable for it. There is now no more time to be lost in delaying the sowing of the first Seeds that are to be sown in the naked Earth, and of which we have spoken in the Works to be done about the end of *February*. Good Gard'ners ought to cover with Mold, the *Cold Beds* which they have sown with their designed Seeds, for fear the waterings and great Rains should beat down the Earth too much, and render its *Superficies* too hard for the Seeds to pierce and shoot through; they should also bank up their cold Beds tightly with a rake, that so the Rain water, or that of their waterings may keep in them, and not run out of them into the Paths; and in fine, if they have never so little of the Spirit of Neatness in them, they will not fail to take away all the Stones the Rake meets with in its way.

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The way to cover well all these Seeds with Earth, is to harrow or rake, that is, to move it extremely to and fro, which is commonly done with an Iron Rake.

About *Mid-March* at furthest, we make the *hot Beds* in which we are to replant the earliest *Musk-melons*.

We sow in the naked Earth, in some well sheltered place, all those things which we are to plant again in the like; as for Example, both our Spring *Lettuce*, and that which we are to replant again at the latter end of *April*, and at the beginning of *May*, viz. the *Curd's Bright Lettuce*, and the *Royal*, and *Bellegarde Lettuce*, the *Perpignan Lettuce* which is greenish, the *Alfange*, the *Chicomis*, and the *Green*, and *Bright Genna Lettuces* are near two Months on the Ground, before they grow big enough to be replanted. And we also sow *Cabbages* for the latter Season, and *Coltsflowers* to plant them in their proper places, about the end of *April* and beginning of *May*; and if they come up too thick, we take out some, and replant them in a *Nursery*, to make them grow bigger, &c.

We sow *Radishes* in the naked Earth, among all the other Seeds we are sowing, because they do no harm there, but are fit to be gathered at the beginning of *May*, before either the *Sorrel*, *Chervil*, *Parsly*, *Ciboule*, &c. be grown big enough to suffer any inconvieny by them.

We sow *Arrach*, or *Orange*, in the naked Earth.

About *Mid-March*, we sow *Citrus* or *Pompions* upon *hot Beds*, to replant in the beginning of *May*.

Commonly there is nothing fit to be replanted in *Cold Beds* at their coming out of the hot ones, till the end of *April*, or the beginning of *May*, unless it be *Lettuce*, and the Earth must be a little warmed before we remove any thing into it out of a *Hot Bed*, in which the Plants were still cherished with some remaining heat, or else they will all come to nothing there.

We make an end of pruning and planting during the course of this Month, of all Garden-Trees, and also of *Gosberry*, *Currant*, and *Raspberry shrubs*, &c. It is very convenient to delay the pruning of vigorous Trees till they begin to sprout, as well to let them spend their first Strength, as to prevent the losing any of their Fruit Buds which we cannot till then discern, and which come to their perfection in the Spring-Season.

We take up at the beginning of the Month, with Mold and all, the plantation of *Strawberries*, which we had in the *Nursery*, to form *Cold Beds* and *Squares* of them to remain and to refresh those where there want any.

We sow some seed of *pieper* or *Garden Sampire* in some tub of Earth, or in the naked Ground some sheltered place; it requires commonly two Months to come up, and when it is big enough, we replant it in the Month of *May*, and sometimes we let it grow till the next year, in order to replant it at the foot of some Wall.

We sow a third time a few more *Peas*, for we should be sure to sow some of them every Month of the Year, and these now sown must be of the great Square sort.

We now have some *Mushrooms* either upon some *Hot Beds* made purposely for them, or in some other places well dunged.

At the very beginning of the Month, we sow some little quantity of *Endive* very thin, to have some of it whited about *Mid-summer*.

When we know that the Paths between *hot Beds*, or *Asparagus Banks*, have been sufficed with very long Dung, so that there seems not to be heat enough in them, and if it be very hot weather, it is convenient to water them reasonably well, that so the Straw in them being wetted, may the more easily ferment into a heat.

Towards the end of the Month, or at the beginning of *April*, we sow a little *Celery* in the naked Earth, to have some late in the Months of *August* and *September*. *Celery* is commonly almost a Month a coming up; and we sow a little of it at the same time on a *Hot Bed*, in order to have some of it early.

We digg about the Roots of Fruit-Trees, that we may have finish that work before they blossom; the Frost being more dangerous in Soils newly moved and turned up than in others.

We begin now to uncover a little our *Artichokes*, but seldom begin to manure them till the full Moon of *March* be past, which is generally very dangerous both to them and to the *Figg-trees*, which last must not yet be quite uncover'd, it being enough to do it half way, at the same time we take off all their dead Wood and Branches, whether killed by the Frost, or by any other means.

About the middle of *March* or before, if the weather be mild, we begin to sow some *Red* or *Golden Purslain* upon *hot beds* under *Bells*, and continue still to sow of the *Green* sort.

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We replant in their fixt places common *Cabbages* and *Milan Cabbages*, which we should take care to have ready in our *Nursery*, from the beginning of *November* last past, in some well sheltered place, but we replant none of those that begin to mount, that is, to run up their stalks, as if they were going to Seed.

We sow upon some end of a *cold bed* in plain Earth, some *Asparagus* Seed for a *Nursery*, to furnish us with a Provision of it, which is sown like other Seed.

We plant the *Asparagus Squares* we have occasion for, to which purpose we make choice of a fine Plantation of one years growth, or else of one of two.

The way to plant *Asparagus* is, to place two or three Plants of them together, and neatly to spread out their Roots without cutting them but very little, unless we please, and then to cover them with a layer of Earth of two or three Inches thick, to plant these Tusks Chequer-wise, at a foot and a half's distance one from the other.

This *Cold Bed* should generally be full four Foot broad, that there may be room enough for three ranks of them. But if we design to force any of them by heat in *Winter*, we must make the *Cold Beds* but three Foot broad, and we must observe, if the Ground be dry, to lay the Bed hollow within the Earth, with a good Spade, and by that means raise the Paths Arch-wise, making use of the Soil that comes out of it to cover again by little and little, and year by year, the Plantation as it grows stronger, and rises out of the Ground. But if it be in a moist Ground, and very cool, it is better not to make the Bed so low nor hollow, but on the contrary to keep it a little higher than the paths, that the Winter waters may descend out of it into them, and may not rot the Plants, to which nothing is more dangerous than too much wet.

*Asparagus* both old and young must be carefully hewed, or cleared of Weeds, and in this Month of *March*, before they begin to appear above Ground, we must afford them a little manuring, by turning up the Earth to the depth of half a foot about them, to give the young *Asparagus* the more Liberty to shoot up.

The *Radishes* that are sown on *hot Beds* with a cast of the Hand, are generally not so fair nor so good as those sowed in holes, and are more apt to grow hollow and stringy than they.

We still continue to make some *Hot Beds* for *Radishes*, that we may be still supplied with them, till the beginning of *May*, when those sown in plain Ground come in. All the other Months in the Year will produce us enough of them, if we will take the pains to sow some from time to time, and be careful liberally to water them.

At the beginning of the Month it will be time to replant what we have a mind should run to Seed, viz. *Leeks* and *Onions*, and especially the white sort, *Cloves of Garlic*. *Cloves* and Seeds of *Shalots*, white *Cabbage*, *Pancoles* *Cabbage*, &c. Now likewise we are to tie up such *Lettuces* as should *Cabbage*, and yet do not, which tying makes them in a manner *Cabbage* by force.

We sow the Seed of *Pannacht* or striped *Gilliflowers* upon *Hot Beds*, before the full Moon, to replant them in *May*; we also sow the *Annual Flowers* upon *hot Beds*, to replant at the latter end of *May*, viz. *Passe velours*, or *Velvet Flowers*, called also *Flower gentles*, and *Amaranthus*, *Indian Ocellus* or *French Marygold*, *Indian Rorer*, the *Belles de Nuit*.

We make an end of Planting Trees both in their fixt places, and in Baskets.

We bestow the first manuring upon all sorts of *Gardens*, as well to render them agreeable to the sight, during the *Easter Holy-Days*, as to dispose the Ground for all sorts of Plants and Seeds.

We set in the Ground, *Almonds* that have sprouted breaking off the sprout before we plant them.

We sow in the *Flower Plots*, or *Payerres*, some Seeds of *Poppy*, and of *Lark Heels*, which will flower after them that were sown in *September*.

We plant *Oculus Christi*.

Towards the twentieth day of this Month, we sow some *Capucin Capers*, or *Nasturties*, to Replant them again a Month after in some good *Exposition*, or at the foot of some Tree.

## Works to be done in April.

There is no Month in the year wherein there is more work to be done in *Gardens* than in this, for now the Earth begins to be very fit, not only to be manured, but to receive whatsoever we have a mind to plant or sow in it, as *Lettuce*, *Leeks*, *Cabbages*, *Borage*,

*Borage, Bugloss, Artichokes, Tarragon, Mint, Violets, &c.* Before the Month of *April*, it is as yet too cold, and after *April*, it begins to be too dry.

We furnish those places where any new planted Trees give but little marks of their prospering, whether it be by *Gum*, in Stone Fruit, or by pitiful small shoots in all manner of *Fruit Trees*. But for this important Reparation, we must have brought up ready to our hands, some Trees in *Baskets*, which an understanding curious Person will never fail to have made provision of, who will have the pleasure to plant some of them near those that thrive not so well as they should do, when he is not well assured they will absolutely die; for when we are sure of that, we pluck them up quite, to make room for them we should substitute in their place, for which purpose, we make choice of close and rainy weather.

We perform now our second pruning of the Branches of *Peach-Trees*, I mean only the Fruit Branches, in order to cut them off short to that part just above where there is Fruit Knit; and if any of those *Peach-Trees* have produced any very thick shoots upon high Branches, as sometimes it happens after the full Moon of *March*, we pinch them to make them multiply into Fruit Branches, and to keep them low, when there is occasion, that they may not run up too high before their time.

*Peas* sown in a good *Expulsion*, at the very middle of *October*, should begin towards the middle of *April*, to put forth at least their first Blossoms, and consequently must be pinch'd; the Blossom springs out commonly in *Peas*, from the middle of the fifth or sixth Leaf, from which same place, there springs an Arm or Branch that grows exceeding long, and produces at each Leaf, a couple of Blossoms like the first, and therefore the more to fortify the first, we cut off that new Arm or shoot, just above the second flower.

We continue to trim *Musk Melons* and *Cucumbers*, to new heat our *Hot Beds*, and make new ones, and to sow *Cucumbers*, that we may have some to replant that may ripen about the end of *Summer*, and beginning of *Autumn*.

We make some hot *Musbroom Beds* in new Ground, the manner of doing which, I have already described elsewhere.

'Tis the *Moon* of this Month, that we vulgarly call the *Ruddy Moon*, it being very subject to be windy, cold and dry, and to be fatal thereby to many new planted Trees, unless great care be taken to water them about the Foot, once a Week; For which purpose we make a round hollow circle or small Trench, round about their foot just over the part where the Extremities of their roots are, and then pour into the said Trench or Circle, a pichler full of water if the Tree be little, or two or three, if it be bigger, and when the water is soak'd in, we fill up the Circle again, if we think good, with Earth, or else we cover it with some dry Dung, or Weeds newly pluck'd up, that we may the better repeat our watering once a Week during the extreme dry Weather.

We weed up all the ill weeds that grow among good Seed, we take the same course with *Straw-berries*, *Pears*, and replanted *Lettuce*, and we hoe all about them, the better to loosen the Earth, and open a passage for the first rain that shall fall.

About the middle of *April*, we begin to sow a little *White Endive*, in plain Ground, to whiten it in the same place; and provided it be thin sown, no Seed comes so easily up as this sort of *Endive*.

At the middle of *April* we also sow in their places, the first Spanish *Cardons*, and the second at the beginning of *May*; the first are commonly a Month in coming up, and the others about 15 days.

We also still sow in this Month, some *Sorrel*, if we be not sufficiently provided with it before; and we sow it either in *Cold Beds*, in little furrows, which is handsomest, or else scattering on the plain Ground, which is most common; or else upon the sides of *Squares*, to serve for an edging: we likewise replant in rows or furrows, that which we remove from other places, and is but about a year old, and especially of that of the large fort, whether our necessities have obliged us to break up some *Bed* of it, and that we be not minded to lose it, or whether we do it designedly.

We use the same method with *Fennel* and *Anis*, and if the high winds, and Cold hinder us not, we begin to give a little Air to our *Musk Melons* under *Bells*, and continue to give them a little more and more of it by degrees, till the end of *May*, when if we be in a good Climate, we take off the *Bells* quite. And we lift up each *Bell* with three little forks, otherwise the plant hurt by its sides, would dwindle and grow lank. And if after we have given it a little Air, the Cold continues still sharp enough to spoil the branches and Leaves of it that are sprouting, we take care to cover them with a little dry Litter.

At

At the end of the Month, we replant the *Radishes* we have removed from the *Hot Beds* where we first raised them, to make a good provision of Seed, choosing for that purpose, those that have the *Reddest* roots and the fewest leaves, and we need only make holes at a foot distance one from the other, in one or more *Cold Beds*, with a planting stick, and thrust in the *Radishes* into those holes, and then press down the Earth about them, and afterwards water them, if the rain do's not spare us that labour.

We choose apart of the fairest of the *Cabbage-Lettuces*, as well the *Winter* ones, which are the *Shell*, and *Jerusalem Lettuce*, as the *Curled Bright Lettuce* raised upon *Hot Beds* and under *Bells*, to plant them all together in some *Cold Beds* at a foot distance one from another, to let them run to Seed; which we also perform with a planting stick.

We plant edgings of *Time*, *Sage*, *Marjoram*, *Hyssop*, *Lavender*, *Rue*, *Worm-wood*, &c.

We replant *Spring Lettuce*, to *Cabbage*, which succeed one another in this order; the *Curled Bright Lettuce* is the first and best, as being the most tender and delicate, but it requires a mild and light Soil, or above all, a *Hot Bed* to plant it on, under *Bells*, from the Month of *February*, and during all the Month of *March*, and the beginning of *April*. A gross Soil agrees not with it, for instead of growing bigger there, it dwindles to nothing.

The *Green Curled Lettuce*, the *George Lettuce*, the *Little Red Lettuce*, and those called the *Royal*, the *Bellegarde*, and the *Perpignan*, follow next after. The *Royal Lettuce* is a very fair and thick *Lettuce*, which differs only from the *Bellegarde* in that it is a little less *Curled*. The *Capucin*, *Short*, *Aubervilliers*, and *Austrian Lettuces* succeed them, and run not so easily to Seed, as the preceding ones. The *Asperger*, *Chicom*, and *Imperials* which are all *Lettuces* to tie up, bring up the Rear; and the *Gemma Lettuce*, both the *Red*, *Bright*, and *Green*, are the last *Summer Lettuces*; we must replant a good number of them at the very beginning of *May*, to have them good about *Mid-summer*, and all the rest of the *Summer*; of all *Lettuces*, this sort best endures the great heats, and is least disposed to run to Seed; for which reason to obtain Seed of it, we must have sown it upon *Hot Beds* from the very Month of *February*, that we may have some good plants of it to set again at the latter end of *April*.

The *Royal Lettuce* begins again to be fit to be replanted about the middle of *September*, to supply us, together with that of *Gemma*, all the rest of *Autumn*. From the end of *August*, we begin to sow the *Shell*, or *Winter Lettuce*, that we may have some fit to replant in the Months of *October*, and *November*, for our *Winter* provision.

It is hard to make any Descriptions of these sorts of *Lettuces*, exact enough to distinguish them by, the difference between them consisting chiefly in having Leaves a little more or less green, or *Curled*; It is enough for the curious to know their names, to be enabled to ask for them of their Friends, or buy them of the Herb Merchants, we learning effectually to know them in the using. The two *Crisped* or *Curled Sorts* are so called, from the *Curling* of their Leaves, and the *Red* ones from their Colour. The *Shell Lettuce* has a very round Leaf which is very apt to shut up like a *Shell*.

There is an infinite Diversity of kinds of *Lettuces*, the worst is that which we call *Cats Tongue*, which is very sharp pointed, and never *Cabbages*. The *Aubervilliers Lettuce* grows so very hard that it is scarce fit for *Salads*, but is better for potage; but yet it is very subject to be bitter.

We must not fail every fifteen days, to sow a little *Gemma Lettuce*, that we may always be provided with some fit to replant during all the whole *Summer*, till the middle of *September*; we must be careful and especially in rainy weather, to destroy both the *Black* and *Shell Snails* that come out of the Walls where they breed Young ones, because they do a great deal of mischief by gnawing the young Shoots of Trees, and new planted *Lettuces* and *Cabbages*. If the *Ruddy* or *Dry Winds* Reign, as they generally do this Month, we must carefully and plentifully water every thing in our *Kitchen-Garden*, except it be the *Asparagus*.

We continue to trim *Musk Melons*, and *Cucumbers*, and plant new ones upon new *Hot Beds*, at the beginning of this Month, and we also sow some in the naked Ground, in little Dikes filled with mold, or compost, like to those I have already mentioned for *Cardons*.

We now likewise search the Woods for Young *Straw-berry Plants*, to make *Nurseries* of, in some part of our *Garden*, we plant tufts of two or three plants of them together at four or five Inches distance one from another, and if the Soil be dry, in a hollow *Bed* of two or three Inches deep, the better to retain and preserve the rain water, and that of our waterings, or else upon some *Bed* near some *Northern Wall*.

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We also now dis-eyc or separate the Off-Sets or Slips of our *Artichokes*, as soon as they are big enough, and we plant as many of them as we need, two or three of them in each hole, or Trench of about three or four Inches deep, and two full Foot and a half distance one from the other, each *Bed* should be four foot wide, and contain two rows of *Artichoke* Plants along its sides, and there must be a void space left in the middle, of three foot wide for the planting of *Leek Chais*, or great whited *Leeks*, or else of *Collyflowers*, in imitation of the Market-Gard'ners, who are good Husbands of their Ground. The two *Artichoke* Plants which we set in each hole, must be placed a full foot and half distance one from the other.

We still continue planting *Asparagus*, and filling the places where there are any wanting, if we can timely discover them, and we take care to water the new Plants.

We likewise still bind up those *Lettuces* that Cabbage not as they should.

We keep open the Windows of the green Houses, where our *Orange Trees* are in fair weather, to reaccustom them by little and little, to the wide Air; towards the end of the Month, we bring out our *Tulips* and trim it; we also begin to prune our Vines at the first coming in of the Month, if we have neglected to do it about the middle of *March* last; and we prune the *Wall Vines* sooner than those in the open Fields.

We have already in the month of *March*, set into the Earth, those *Almonds* which sprouted early, and in this Month we set those which having not sprouted at the same time with the others, had been put up back again into Mold, Earth, or Sand.

In the beginning of this Month, Gardens should be almost in their Perfection, as well for their general neatness, and pleasing Prospect, as being all over covered either with the green Seedlings of all sorts which have been sown, or with Plants which have been set, excepting *Endive*, *Succory*, *Celery*, *Collyflowers*, &c. which are not replanted till about the middle of *May*. In fine, if we have neglected any thing that should have been done in *March*, we must be sure to do it at the very beginning of this Month, and particularly, we must sow *Parsley*, *wild Endive*, or *Succory*, and the first *Haricots* or *French-Beans*, the second being to be sown about the middle, and the third at the latter end of *May*, that so we may have a crop of them about two Months after sowing.

About this time, the *Strawberries* growing in the naked Earth, shoot forth their stems, when we must take exact care to pluck all the *Cuckers* among them, that is, those *Strawberry* plants that blossom much without knitting; nay, I would have the *Caprons* plucked up too, unless any Person have a particular fancy for them, they are calie to be known by their thick short and Velvet stems, and their very long Velvet, and sharp pointed Leaves; but the *Cuckers* are somewhat hard to be distinguishing, particularly till their stems be formed. The most part of them are *Strawberry* Plants that have degenerated, and yet so, that the Leaves of the good ones and the bad ones are pretty like one another; but those degenerate Plants in process of time by their runners, produce an infinite number of others, which to appearance are very fair, and consequently very apt to deceive us, yet those that are acquainted with them, observe that they are a little more Velveted, and somewhat greener than the good ones. And in Conclusion, I must tell you, that if extraordinary care be not taken to extirpate those unlucky Plants that impose upon us thus by their Beauty, we shall in little time find ourselves stockt with none but such, to which the Proverb particularly agrees, which faith, a *fair show*, but little *Fruit*.

We sow our last *Cucumbers* about the tenth or twelfth of this Month, to have some lateward ones, and such as may be fit to pickle in *October*, which last are commonly called *Cornichons*, or horned *Cucumbers*, and in *English*, *Crumplings*, and *Guerkins*.

The *Strawberry* stems must be much pinched, and some of them must be quite plucked up too when they shoot up in too great Numbers from feeble Plants; by pinching, here is meant the taking off the last Flowers and last Buds of every stem, leaving but three or four of those that first appeared upon those stems, and which are nearest to the Ground.

It is particularly about the end of this Month, that *May* Moon begins, that is so fertile, and so vigorous in its Productions, when we must with all possible care run over our *Wall-trees*, and draw from behind the Trails, those Branches that grow between them and the Wall, as well the smaller ones, as more particularly those that are thick: at the same time *Peach-Trees* and other *Stone-Fruit-Trees* are to be pruned the third time, it having been done the second time whilst they were in Blossom, to take away all those Branches that had not blossomed. And at this time we reckon, that all those Blossoms that will knit at all, are already knit, and accordingly we are not to count any of them for true *Peaches*, but those only that are well knit, and of a pretty bigness too, because till

till then, many of them continue to fall, though they seemed well knit. And therefore it is convenient to shorten all those Branches which having been left long purposely for Fruit, have not answered that end, but have either retained no Fruit at all, or a very small quantity, and which perhaps sprout but weakly, that is, produce but very little shoots, or perhaps nothing but Leaves, the feeblest of those Branches must be discharged of all their shoots, to one or two at most, and in general, all those Branches must be shortened, that appear not vigorously, or that are blasted by the *Ruddy Winds*. And Lastly, we must leave only such a burden of Branches and Fruit on the Tree as shall be proportionable to its greater or lesser Vigour, and accordingly we must leave a great deal upon vigorous Trees, especially if they be sprung from Stones, and but a little on them that are weak, and always aim as near as may be, to form that which we call a goodly Tree, taking all possible care that each Fruit-Branch may have its Fruit at its Extremity. This third pruning should be done either before we new nail up our *Wall-Trees*, or at least whilst we are nailing them.

At this time likewise, we are to pinch, that is to say, break off, to four or five Eyes or Buds, those thick shoots in *Peach-Trees* that are sprung out since the main Pruning of that year, in order to make them shoot out three or four midling shoots, one whereof may be for a Wood Branch, and the rest for Fruit; this Operation is to be performed particularly upon those very thick shoots that spring out of the Extremity of a Tree that is grown high, when it has already attained its due height. It is likewise sometimes, though rarely performed upon the lower shoots, when we have occasion to fill up any void places that are made near any very thick Branches, whether young or old, which we have cut short the last Winters Pruning; those thick Branches are but too subject either not to sprout at all, or to grow full of Gum, both they and the young Shoots they produce in the *Spring* time.

It is not convenient to pinch any of all the other Fruit-Trees, excepting *Grafts*, when having been grafted upon thick stocks, they have begun to shoot out with too much rigour, because the shoots of such grafts would grow too high, and too bare, if they were not checkt by this Operation, and made to produce many Branches that prove good, instead of one that otherwise might have remained useless, unless it be in such occasions we may pinch as long as we please, we shall never gain any advantage by it. Sometimes pinching extends likewise to *Fig-Trees*, but that is not to be done till the end of *May*, as I shall further shew afterwards.

### Works to be done in May.

THE Effects of Vegetation during the Month of *March*, seemed to be but little proofs of Trial which Nature then made in order to some greater performances. For alas, Trees blossoming or shooting forth Leaves, or beginning to put forth swelling Buds, &c. are all marks of lesser vigour than weakness, after which, in the productions of *April*, we have seen the same Nature augment in strength, and shew its effects by the knitting of Fruit, lengthning out Branches, and the coming up of sown Seeds, &c. But at length when we once come to the Month of *May*, 'tis then that *Mother of Vegetation* seems in earnest to display and exert all the force she is Mistress of, in order to the maintaining her self in that flourishing Estate during the whole Months of *June* and *July* following, at this time covering the Walls with new Branches, plumping the Fruit, and covering the Earth with a lovely and charming verdure, &c. And now our Gard'ners have great need to be upon their Guards, to prevent their Gardens falling into disorder, because 'tis most sure, that if they be not now extremely careful and laborious, there is no Disaster, but they may expect; pernicious Weeds will in little time choke up all their good Seeds, their Walks and Alleys will be overgrown, and their Trees will fall into the greatest Confusion, for which reasons it will highly concern them to be extremely watchful and diligent to weed, manure, cleanse, to take off all superfluous Leaves and Sprigs, and to nail up *Wall-trees*, by which means it will be in their Power to acquire the desirable Commendation of having adorned and set out their Gardens with all the lustre and excellency which they ought to have.

*Green Peas*, that were sown in Banks or Borders in *October*, now begin to recompense our Pains, and to blossom at the coming in of this Month, (the Blossoms last commonly about eight or ten days before they begin to pod, and in three weeks after, they are fit to gather, and shell. In the mean while, about the seventh or eighth day of the Month, we should plant our *Collyflowers*, *Milan Cabbages*, *Capucin Capers*, or *Nasturces*, *Beer-Chards*, &c.

If we plant them sooner, they commonly run to Seed, which is to be avoided; and in fine for those things, we ought not to pass the fifteenth day, nor likewise for the sowing of *Winter Cabbages*. We now make all the hast we can, to make an end of dyeing or slipping our *Artichokes*, which are vigorous, and seem to have need of being discharged and thinned, and we make an end of planting new ones. The Eyes or Sucker-slips are good enough, provided they be pretty thick and white, though they have no root at their heel or foot, and we may be sure to have very fine Fruit from them in *Autumn*, and in truth it were to be wished, they would yield none sooner, because those produced before that time are commonly pitiful, flaveling, and as 'twere abortive Fruits. Yet 'tis not enough to plant only some good thick young slip-fuckers, but we must likewise plant some middling ones, especially in some well sheltered place, only to fortifie themselves there during the rest of the year, that they may be able to yield us their first *Artichokes* next *Spring*; those which have born in *Autumn*, not making such swift advances as these other. Next we are to plant our *Beet Chards* almost at the same time, which are well placed, if planted in the middle of the *Artichokes*, that is, one *Beet* plant between two *Artichokes*, so that there may be some in one Rank, and none in the other, for there must be room enough left free, to go upon to water, weed, manure, gather, and to cover them too, when need shall require.

The Earliest *Musk Melons* begin to knit in the first quarter, or at the full of this Months *Moon*, but chiefly at the wane of it, if their *Beds* were very hot at the full, and are grown cooler at the wane.

We also at the same time Rank our *Fig-Trees* in the place allotted for the *Fig Plantation*, that we may have them in the disposition we desire. They begin then to put forth their Leaves and shoots, and at length their Fruit begins to plump at the full *Moon*.

Towards the end of the Month, we begin with diligence and expedition, to nail up the new shoots of *Wall-Trees*, if they be strong enough to suffer it: And it is convenient to have finish'd this Work at the beginning of *June*, because at the end of that Month, we must begin the second nailing of the first shoots, and the first of those which were never yet nail'd. We must likewise pinch, or break off the thick shoots we find, whether because after the first pinching of *April*, they have not multiplied into Branches as far as they extend, and on the contrary, have produced yet but one thick shoot, or because, though they have multiplied into Branches, they have produced one shoot thick enough to be pinched; for otherwise that thick shoot would be unuseful and pernicious; unuseful, because it must be taken away, or at least be cut very short, and pernicious, because it will, as one may say, have robb'd other necessary shoots of that nourishment they should have had: Always taking it for a Rule, that we must in nailing, take care to couch all those Branches which may and ought to be couched, without tying several of them together, or taking away, or plucking off any that is slightly, unless it be that we can by no means couch it, in which case, we must cut it off within the breadth of a Crown piece of the place from whence it sprouts, in hopes that out of the two sides of the remaining stump of that thickness, there may sprout some good Fruit-Branches, we must also have a care not to lay one cross another, unless we be necessarily oblig'd so to do, to fill up a void place, or to preserve a uniform equality.

If there be any Trees designed to mount upright, we must accordingly order for that purpose, the Branch that seems most proper for it.

We tie the grafts either to their Trunk, or to sticks set up on purpose by them, to make them grow in that figure we would have them, and hinder them from being broken by the Winds.

We sow a great deal of *Genna Lettuce*, and we replant some of them, and of the other *Lettuces* also.

We likewise trim *Pear-Trees*, either to take off the false shoots if any appear, which is done by plucking them quite away when they make a confusion, or even such others which though they be good, yet because they might produce that confusion which is so much to be avoided in a Tree, must therefore be taken off, for the better fortifying of those that are to make the figure of that Tree; for a second shoot will grow much more vigorous, if we take away that which being at the extremity of the pruned Branch was counted for the first.

We sow *Endive*, that we may have some good, at the end of *July*, which may be white-ned in the same place where it first grew, without removing, if it being sown thin, and well watered during the whole Month. We now also take the advantage of some rainy weather,

weather, to replant in their designed places, our annual Flowers, some of them seldom failing to come to good there; we likewise take the advantage of the same time, to fill up with *Basketed*, or *Circumposed Trees*, the places of those that are dead, or that thwart our expectations, or that give us no very good hopes of their thriving. The manner of doing it, is, to make a hole big enough to hold the Basket and Tree, then to put it in, and carefully to fill up with Earth all the hollow space round about the Basket, and to press it down hard either with the foot or hand, and then to pour down all round upon it, two or three pitchers full of water, in order to the better incorporating the Earth without, with that within, so that there may not be left the least hollow in the soil. It is necessary to renew these waterings two or three times during the rest of the Summer.

We also still plant *Beet Chards*, choosing for that purpose the brightest of those that are of the growth of the last sown Seeds, as being both fairer and better than those which are green.

We continue our *Nurseries* of *Straw-berry* Plants till the end of this Month, at which time, we may perfectly distinguish the good ones by their Stems, or upright shoots.

We also still continue to tie up those *Lettuces* that *Cabbage* not as they should.

We sow no more *Lettuces*, except *Genna Lettuces*, after the middle of *May*, because all the rest but only this last sort, are too apt to run to Seed.

We replant *Musk Melons* and *Cucumbers* in the naked Earth in little Holes or Trenches filled with mold; we also plant *Pumpions* or *Citruls* in the like holes, at the distance of three *Toises* or *Fathoms*, they are such as have been raised on *Hot Beds*, and therefore to make them take root again, the sooner, we cover them with something for five or six days, unless it rain, the great heat of the Sun, otherwise being apt to make them wither, and sometimes to kill them quite.

We continue to sow a few *Pears*, which must be of the biggest sort; and if we think good, we pull off some of the Branches of the others that are over vigorous, after they are well cleared of Weeds; *Pears* that are disbranched, bearing a more plentiful crop than others.

We bring out our *Orange-Trees* at the first quarter of this Months *Moon*, if the weather begin to be secure from the assaults of the Frost, and we put them into boxes that have need of it; I refer you for their culture to the Treatise I have compos'd expressly about that subject: It was our care during all the fair days in *April*, to leave open the windows of their *Conservatories*, to accustom them by degrees, to the open Air.

We trim our *Jasmins* when we bring them out, cutting off all their Branches to the length of half an Inch.

At the end of this Month, we begin to clip for the first time, our palisades, or pole hedges of *Box*, *Filaria's*, *Tew* and *Espica's*.

Above all things, care must be taken to water all our plants largely, or else they will all roast and scorch, whereas by the help of reasonable waterings, we may visibly perceive them thrive. We also now water new planted Trees, and for that purpose, we make a hollow Circle of four or five Inches deep, round about the extremities of the roots, and pour into it some pitchers of water, and when 'tis soak'd in, we either throw back the Earth into the Circle, or else we cover it with dry Dung, or litter, in order to renew our waterings several other times, till the Trees have taken fast root again, after which, we fill it up with Earth again.

We may begin to replant our *Purslain* for Seeding towards the end of the Month.

We continue to trim *Musk Melons*, but we replant no more of them after the middle of *May*.

But we still continue to plant *Cucumbers*.

About the end of the Month; we begin to plant *Cellery*, and we use two ways of planting it, viz. either in *Cold Beds* hollowed into the Ground, as we do *Asparagus*, planting three ranks of them in every *Bed*, and placing both the ranks, and the *Cellery* plants at about a foot distance one from another, and that is the best way for them when they are a little bigger than ordinary, that so we may be able to raise the earth about them afterwards, with that which was taken out of the furrows, and which was thrown upon the next *Cold Beds*, or else we replant them on plain Ground at the same distance as before, and at the end of *Autumn*, binding them first with two or three bands; these are raised in tufts, that we may replant them as nigh as we can, to one another, that so they may,

may be the more easily covered with long dry Dung, and be the better whitened, and defended from the Frost.

Towards the end of the Month, we begin to tie our *Vines* to their props, and to nail up such stocks of them as are planted by *Walls*, after we have first clear'd them of all their feeble, unprofitable, and unfruitful Shoots and Sprigs.

We likewise plant single *Anemones*, which flower a Month after, and we may have planted some every Month since the last preceeding *August*, they blowing and flowering in the same manner, if not hindered by an extream cold Season.

At the very beginning of the Month, or at least as soon as ever we can, we pick off, and thin our *Apricocks* when there are too many of them, never leaving two close together, that so those we leave on, may grow the bigger, and at the end of the same Month, we may pick off, and thin our *Peaches* and *Pears*, if they be big enough, and there be two many of them. About that time also, or at the beginning of the ensuing Month, the first bright *Calbages* are to be sown for *Autumn* and *Winter*, the biggest of them which are replanted in *July*, being to be eaten in *Autumn*, and the less vigorous which are replanted in *September* and *October*, being to serve for our Winter Provision.

During all the Month of *May*, the shoots of *Wall-Trees* are apt enough to slide themselves behind their trails or props as I have said in the Month of *April*, and we shall hardly be able to draw them out again without breaking them, unless we do it in time, and be careful once every Week, to take an exact view all along our Walls, to remedy so mischievous an inconvenience, against which too much caution cannot be used. Many Branches grow crooked, rugged, and hooked at the ends, and their Leaves also; and therefore about the full Moon, we must pull off those Leaves so crumpled and hooked, and break off as low as we can, the parched shoots, that there may spring others instead of them that may be better and straighter. *Fig-Trees* too must now be pruned, and especially those in Boxes, of the method of doing which, I have composed a particular Treatise.

We continue to sow a few *Radiishes* among other Seeds, as we should have also done in the two last preceeding Months.

We also now take the advantage of some gentle Showers, or of very cloudy weather, to uncover what we have sheltered under *Glass Bells* or *Frames*, as well for the watering of our *Beds*, as for the inuring and hardening them to endure the open Air.

If our Garden be situated in a Sandy and dry Ground, we endeavour by the help of some little Dykes or Gutters, to carry off all the water that falls sometimes in hasty Storms, to those places that are manured, that none of it may be unprofitably wasted in the Walks or Allies, and if they be situated in Ground that is too strong, fat and moist, such as that of our new Kitchen-Garden at *Versailles*, we drain it away from those Grounds that are incommoded by it, by conveying it into the Walls or Allies, to spend it self there, or shooting it off into Stone gutters that carry it out of the Garden; for which purpose we must raise our Ground into arch'd ridges.

During all this Month, it is good to lay yellow stock *Gillflowers*, by planting cuttings of them, where ever we have a mind, or by laying their Branches that still grow to their Plants.

Those that are curious in *Carnations* and *Clove-Gillflowers*, in order to have double ones, sow some good Seeds of them about the 5, 6, 7, or 8th. of *May* Moon, in earthen Pans, or wooden Tubs, that at least they may begin to sprout at the full Moon, which sometimes happens in *June*, but most commonly in *May*, those plants ought to grow big enough to be removed in *September*, into the naked Earth, that so they may have taken Ground before the *Equinox*; others again content themselves with sowing their Seeds before the *Equinox*.

We should likewise replant before the end of *May*, some *green curled*, and *Angevilliers Lettuce*, that we may have some all the Month of *June*, together with the *Chicom*, and *Imperial Long-Lettuce*.

We must also at this time endeavour to destroy the thick white Worms, which now spoil the *Strawberries*, and *Cabbage Lettuce*, and take away the green *Caterpillars*, which quite eat up the Leaves of the *Currant* and *Gooseberry bushes*, and so spoil their Fruit.

At the end of *May*, we should also thin those Roots that grow too thick, and replant those we have plucked up in another place, as *Beet-raves*, or *Red Beet-Roots*, *Parsnips*, &c.

We

We may replant *Daises*, *Bears-Ears*, and white double *Narcissus*, though in Flower, that not at all hindering them from taking Root again.

## Works to be done in June.

I Here repeat the same Caution I have already given at the beginning of the Works of each Month, which is, that we must be careful to do that at the beginning of this Month, which we could not do in the last, and we must moreover continue all the same Works, excepting hot Beds for *Musk-melons*, which now have no longer need of them, but we may still make some for the latter *Cucumbers*, and for *Muskbrooms*.

We may also plant some *Artichokes*, till the twelfth or fifteenth of the Month, which being well watered, will serve for the next Spring. Waterings are to no purpose, if they soak not to the Root, and therefore the deeper the Plant is rooted, the more plentifully must it be watered, and especially in dry Ground, for in wet Grounds, they must be watered both less often, and less plentifully. For example, *Artichokes* growing in light Grounds, have need of a Pitcher full or two of Water, for each Plant, whereas in stronger Grounds, one pitcher full will serve three.

Towards the middle of *June*, we plant *Leeks* in Holes or Trenches six full Inches deep, at half a foot's distance one from the other, which is done with a planting stick, placing but one of them in each hole, without heeding to press down the Earth close about the *Leek*, when we have done, as is practised to all other Plants that are set with a planting stick.

We continue to sow *Endive*, and *Gemma Lettuce*, that we may be furnish'd with some to replant upon occasion, all the rest of the Summer, and we gather the *Chervil* that is the first that runs up to Seed from the *Chervil*, that was sown the *Autumn* before, cutting off all the Seed stems, and when they are dried, threshing out the Seed, and fanning it like Wheat.

The same method is practised with all Seeds that are gathered each in their proper Seasons, and especially in the Months of *July* and *August*, taking great care to prevent the Birds, who are very greedy of them, from devouring them.

We replant *Beet Chards* in order to have them good to eat in *Autumn*, and they are best placed in the void space remaining between the *Artichoke Rank*, they must be set at the distance of a Foot and a half one from the other.

We must take great care to extirpate all the Weeds which now grow up in abundance, and that particularly before they run to Seed, to prevent their multiplying which they are apt to do but too much of themselves without sowing.

We must now also without further delay, clip all our *Palisade's*, and edgings of Box, so that they may be all furnish'd at furthest at *Mid-Summer*, and have time to shoot out again before *Autumn*; and we must liberally water all Seeds sown in our *Kitchen Garden*.

We must water plentifully, and every day the *Cucumbers* upon *Hot Beds*, and *Musk-melons* moderately two or three times a Week, allowing half a pitcher full of Water to each Plant.

From the very middle of *June* we begin to graft by *Inoculation*, our *Stone-Fruit-Trees*, and especially *Cherries* upon great Trees, upon Wood of two years growth, which are cut off three or four inches from the place where the *Scutcheon* is to be placed. The best time for this, is always before the *Solstice*.

Gross Soils must be often stirred and manured, that they may not have time to grow hard, and chap, commonly we bestow an universal manuring or stirring up the Ground upon all our Gardens in this Season, and the best time to stir dry Grounds in, is either a little before or after Rain, or even whilst it rains, that the water may the more swiftly penetrate to the bottom, before the great heat comes to turn it into Vapors, and for strong and moist Soils, we must wait for hot and dry weather, to dry and heat them, before we move them, careful Gard'ners make Dykes to convey the glut of Water that fall about this time in hasty Storms, a cross their Squares, especially if their Ground be light; but on the contrary, if it be too strong, they drain the water out of the Squares, as I have said already, when I was speaking of the works of *May*.

Persons curious in *Carnations*, and *Clove-gillflowers*, should have begun before this time to put Rings about each plant of them, to keep up their mounting stems, and hinder the Winds from breaking off their Buds or Buttons, the like they do to their *Sedums*, &c. and if they have not yet done it, they do it in this Month, and not only take off

from them the small Buds that grow upon them in over great Numbers, to fortifie the principal ones, but likewise the greatest part of the mounting stems, in order to preserve only one of the fairest, and most likely, to produce the most beautiful Flowers.

We also still continue to destroy the thick white Worms that spoil the *Strawberries* and *Cabbage Lettuce*.

We carefully cultivate our *Orange-Trees*, according to the method prescribed in the Treatise I have composed purposely on that Subject.

The *Wild Parslain* begins to appear at the beginning of *June*, and lasts till the end of *July*, which must be carefully scraped.

We take up our *Tulip Roots* out of the Ground at the end of this Month, their *Leaves* being then withered.

We disbranch *Harico's* or *French-Beans*, and towards the end of this Month, we sow *Peas* to have them fit to eat in *September*.

### Works to be done in July.

THIS Month likewise requires a great deal of application and activity in a Gard'ner, to do all that he could not do the last Month, and to continue still all the same Works, but only the *hot Beds*. Now the great heats without waterings, do very great damage, but being allayed with frequent waterings, give Birth to very fine Productions.

In this Month, many sorts of Seeds are gathered, and *Endive* is sown for the provision of *Autumn* and *Winter*. We also sow *Royal Lettuce* to have it good for use at the end of *Autumn*.

We also still continue to sow some *Ciboules*, and white *Beets* for *Autumn*, and some few *Radishes* in cool Places, or such as are extremely well watered, to have them fit to eat at the beginning of *August*.

If the Season be very dry, we begin at the latter end of the Month, to graft by incision of a Dormant Bud, upon *Quince-trees*, and *Plum-Trees*.

We begin to replant *White* or *Bright Cabbages* for the end of *Autumn*, and the beginning of *Winter*.

We sow more *Lettuce Royal*.

We sow for the last time, our *Square Peas* in the middle of *July*, that we may have some to spend in *October*.

In this Month particularly, *Peach-Trees* produce several shoots. About the middle of *July*, we begin to lay our *Clove-gillflowers* and *Carnations*, if their Branches be strong enough to bear it, otherwise we must stay till *August*, or the middle of *September*.

From the very middle of *August*, we begin to sow *Spinage* to be ready about the middle of *September*, and *Maches* for *Winter Sallets*, and *Shell-Lettuces*, to have Provision of *Cabbage-Lettuces* at the end of *Autumn*, and during the *Winter* Season.

We replant *Strawberry* Plants in their designed Places, which we had raised in Tufts.

We gather *Lettuce* and *Radish* Seeds, as soon as ever a part of their Pods appears dry, and then we pull up their Plants, and lay the whole a drying.

We also gather the Seeds of *Chervil*, *Leeks*, *Ciboules*, *Onions*, *Shalots*, and *Recomboles*, or *Spanish Garlic*.

We sow *Radishes* in the naked Earth, for *Autumn*.

At the latter end of the Month, we sow some *Cabbage* in some good Exposition, to remove into a *Nursery*, in some other well sheltered place, where they are to pass the *Winter*, in order to be replanted in their designed places in the following *Spring*.

We also sow all the Month long, some *Shell-Lettuces* in some good Exposition, as well to replant at the end of *September*, or beginning of *October*, in the places where they are to remain under some good shelter, as to have some ready hardened to the cold, to replant again after *Winter*, either in the naked Earth in the Month of *March*, or upon *hot Beds* at the very beginning of *February*, and if the *Winter* be very cold, they must be covered with long Litter.

We may sow *Onions* to have good ones the next year, at the very beginning of *July*, which it is best to replant in the Month of *March* next following.

We now water liberally.

We

We replant a great deal of *Endive* at a large foot distance between Plant and Plant, as also *Royal* and *Perpignan Lettuces*, which are very good in *Autumn* and *Winter*.

We sow *Maches* for *Leeks*.

We still continue to replant *Winter Cabbages*.

We shear our *Palisade's* the second time.

We continue to nail up our *Wall-Trees*, and by little and little, to uncover those Fruits, which we would have tinged with much Red, as *Peaches*, *Api Apples*, &c.

We tie up our *Endive* with one, two, or with three bands, if it be very high, but the uppermost Band must be always looser than the rest, otherwise the *Lettuce* will burst in the sides whilst it is whitening.

At the middle of *August* we begin to cover with compost, the *Sorrel* that was cut very close to recruit its vigour, a good Inch's thickness of Compost is enough to strew all over it, because they would be apt to rot, if we should use more to them.

We still continue sowing of *Sorrel*, *Chervil*, and *Ciboules*.

We pluck off the runners of *Strawberry* Plants, to preserve their old Stocks in the greater vigour, and when their Fruit is past, which is about the end of *July*, or the beginning of *August*, we cut away all the old stems, and old Leaves, that they may produce new ones.

We also cut away all the old Stems of *Artichokes*, when the *Artichokes* are taken off.

We still continue sowing of *Spinage*, for the beginning of *Winter*.

We take our *Onions* out of the Ground as soon as their Stems begin to dry, and we let them lie ten or twelve days a drying in the Air, before we lay them up in our Granary, or some other dry place, or else we bind them up in Ropes, because otherwise they would ferment and rot, if they were laid up before they were dry.

We gather our *Shalots* at the very beginning of the Month, and draw our *Garlick* out of the Ground.

At the end of *August* the *Florists* set into the Earth their *Jacinths*, fair *Anemones* and *Ranunculus's* or *Crow-foots*, *Junquills*, *Tutus Albis's* and *Imperials*.

We destroy both ordinary *Flies* and *Wasps* which eat the *Figs*, the *Muscat Grapes*, and other Fruits, and for that effect, we tie some *Bottles* or *Cucurbit-glasses* full of water mixed with a little Honey, to some of their Branches, by which means, those insects being allured by the sweetness of the Honey, enter into the necks of those Glasses, and so perish in that mixture, but they must be emptied and shifted with new Water, as often as they begin to fill with those little unlucky insects.

Though the first Bud of a *Clove-gillflower* or *Carnation* is beautiful and Promising, it does not follow thence, that all the rest will be so too.

The Beauties of a *Carnation* are, to be high and tall, well burnisht and garnisht, well ranged, of a lovely colour, well plumed and displayed, and of a perfectly Velvet-like softness to the Touch.

At the beginning of this Month, we tread down the stems of *Onions*, and the Leaves of *Beet-raves*, or *Red Beet Roots*, *Carrots*, *Parsnips*, &c. or else we take off their Leaves quite, to make their Roots grow the bigger in the Ground, by hindering their Sap from spending it self above Ground.

It is still a good Season enough to lay *Clove-gillflowers* and *Carnations*.

### Works to be done in September.

THE Ground in Gardens in this Month should be universally covered all over, so that there should be not so much as the least spot in it without some Kitchen and Esculent Plants, whether sown or replanted, which is not altogether so necessary in the preceding Months, both because we then reserve a good part of our Ground for *Winter* Plants, such as are *Lettuces*, *Endive*, *Peas*, &c. and because some plants require a very considerable time to arrive to perfection in, and would not have enough if they were allowed less than to the end of *Autumn*.

We still continue the works of the preceding Month.

We make *hot Beds* for *Mushrooms*.

We replant a great deal of *Endive*, and that closer together now than in the foregoing Months, that is, we place them at half a foot's distance one from the other, because now their Tufts grow not so large as before.

They

They must be replanted in almost all the spare places from the very beginning of the Month, till the fifteenth or twentieth day. At the latter end of the Month, we sow *Spinage* the third time, which will be good in *Lent*, and even in the *Regation* season following.

We still continue planting *Winter Cabbages*, and especially those of the *Greener* sort.

We may likewise still about *Mid-September*, sow some *Cold Beds* of *Sorrel*, and replant some old, there being yet time enough for it to attain to a sufficient vigour before the first *Frosts* come.

During this whole Month we continue to remove *Straw-berry* Plants out of our *Nurseries*, to reimplace those tufts which are dead in our *Beds*, and we immediately water them, as we must do all Plants which we set a new.

We set some in *Pots* towards the twentieth day, if we intend to force any in the *Winter*.

About the fifteenth of the Month, we graff *Peach-Trees* upon *Almond-Trees*, and upon other *Peach-Trees* as they stand in the places where they are to remain; the sap being then too much diminished to be in any capacity to overflow the *Scutcheons*.

We tie up first with *Oler* withs, and afterwards towards the fifteenth of the Month, we carefully wrap up with long Litter, or new straw, some *Spanish Cardons*, and *Artichoke* Plants, to have them whitened or Blanched about fifteen or twenty days after; But great care must be taken in wrapping them up, to keep them perfectly upright, otherwise they will overfet, and snap in sunder on one side; and to hinder the winds from laying them on one side too, they must be fenced with a Bank of Earth of about a full foot high.

Towards the end of the Month, we plant *Cabbages* in *Nurseries*, in some well sheltered place, in order to replant them in their designed places as soon as the *Winter* is over.

From the fifteenth of the Month to the end, and till the middle of *October*, we replant *Shell Lettices* in some well sheltered place and especially near the foot of some *Southern* and *Eastern Walls*, that we may have some of them *Cabbage* for our spending in *Lent*, and during the whole Months of *April* and *May*.

We bind up our *Celery* with one or two bands below, and then we raise a Butt or Bank about it, either with very dry long Dung, or with very dry Earth, to whiten it; but we must have a care not to tie it up but in very dry weather. The same caution must be observed in all Plants that are to be tied, after which, we cut off the extremity of the Leaves, to prevent the sap from ascending and spending it self to no purpose, by which means it is kept down in the Buried Plant, and makes it grow thick.

We also now tie up the Leaves of some *Collyflowers* whose Fruit seems to begin to be formed.

We cover with compost, the *Sorrel* which has been cut.

We sow *Mâches* for *Lent*, and for *Reponces*, it is not worth the while to sow them in a Garden because there are enough of them in the *Spring* time, to be found in the *Corn* Fields, and by hedge sides.

It is particularly in the Month, and during all *Autumn*, that Gard'ners most desire rain.

We continue to destroy *Flies* and *Wasps* that eat the *Figs*, *Muscats Grapes*, and *Pears*, and other Fruits, &c. with *Bottles*, or *Cucumber Glasses* of Honied Water.

We sow *Poppies* and *Lark's Heels* in Flower Gardens, to have them Flower in *June*, and *July*, before them that are sown in *March*.

In this Month, and the precedent one, we replant *Endive* among *Cabbage Lettices*, these latter having commonly performed their duty, before the *Endive* is come to its full growth. Waterings must be continued as long as the weather is Hot and dry.

Good *Winter Endive*, if our Garden be in a sandy Soil, must be sown from the middle of *August*, to *St. Lambert's Day*, which is the seventeenth of this Month; and if it be in a stronger and heavier Soil, it must be sown a little sooner, and that always very thin, that in a Month's time, it may grow big enough to remove, that is to say, about as thick as ones Finger. It should be planted till the middle of *September*. at six or seven Inches distance between Plant and Plant, that it may be replanted a second time, and that nearer together, afterwards, at the beginning of *September* two or three Inches deep in the Earth, if it be dry and sandy, or at least in a spongy Ground, without cutting off any thing from the Root, which has produced a little tuft, and it must be

be covered in frosty weather, to prevent the cold from rotting it to the very Heart, which caution being observed, it will keep till *Lent*, whereas *Endive* that is come to its full growth before the bitter cold weather, will not keep at all in *Winter*.

### Works to be done in October.

WE continue the same Works as in the preceeding Month, except *Grafting*, the Season for which is now past, but we are particularly bule in preparing *Celery* and *Cardons*; we plant a great many *Winter Lettices*, and some too upon old *Hot Beds*, to force them so as to have them good for our eating about *Marblemas*.

At the beginning of the Month, till the tenth or twelfth day, we sow some *Spinage* to be ready for the *Regation* Season.

We also sow our last *Chervil* upon the Ground, that it may be come up before the great *Frosts*, and may yield Seed betimes the next Year.

At the very beginning of this Month, if we did not do it at the beginning of the last, we take down our *Hot Beds*, and apply our selves to making of *Stacks* or large *Cocks* of the mouldiest Dung, to raise *Mulhrooms* on.

We plant *Winter Cabbages* on those *Stacks*, we lay aside all the Mold or made Earth, to use again when we make new *Hot Beds*, and we carry away the rottenest Dung to those Grounds that are to be dunged.

About the middle of *October*, we carry back into their Houses our *Orange-Trees*, *Tuberose*, and *Jasmin*, placing them there with some agreeable Symmetry, leaving the *Windows* open in the day, so long as it freezes not, but keeping them always carefully shut at Night, till at last we shut them up quite, and carefully dam up both them and the Doors.

We lay the *Tuberose* Pots upon their Sides to drain them from the Water, that the Roots of those plants may not rot in them.

We begin to plant all sorts of *Trees* as soon as their Leaves are fallen.

We still continue to plant a great many *Winter Lettices* in some well sheltered Place, and on some good Borders, at six or seven Inches distance one from the other, there usually perishing enough of them to prevent our Complaints of their growing too thick together.

Towards the middle of *October*, the *Florists* plant their *Tulips*, and all other *Bulbous Roots* not yet set into the Ground.

In this Month we must perform our last manuring and turning up of strong, heavy, and moist Grounds, as well to destroy the Weeds, and give an Air of neatness and agreeableness to our Gardens in this Season, when the Country is more visited by all the World than at any other time, as to make that sort of Ground timely contract a kind of Crust, that may hinder the *Winter* waters from so easily penetrating them, and on the contrary, may shoot them off down to places of a lower Situation.

We continue our Hostilities against the *Wasps* that destroy the *Figs* and *Grapes*, and the good *Plums* and *Pears*, &c.

We cut old *Chervil*, that it may spring afresh.

It is convenient to begin to sow now in some well sheltered place towards the *South* or *East*, or else upon *Hot Beds*, those *Sallets*, &c. that are to be made use of in *Winter*, or early in the *Spring*, upon Condition they be well covered when sown, against the cold, when it shall be time.

### Works to be done in November.

IN this Month we begin to force an *Artificial Spring* by the means of our *Hot Beds*, upon which we sow little *Sallets*, viz. *Small Lettice* to cut, *Chervil*, *Cresses*, &c.

We plant *Lettice* to *Cabbage*, under *Bells* or *Glass Frames*, and we replant upon them, *Mint*, *Tarragon* and *Balm* Plants, and some *Sorrel*, wild *Endive* or *Succory*, and *Macedonian Parsley*. We also sow in them *Peas*, *Beans*, *Parsly*, and *Burnet*, and if the weather still continue pretty fair, we make an end of planting *Lettices* in places of good shelter.

This is peculiarly the Month of the greatest Work and Labour of all, in order to the avoiding the inconvenience of wanting Garden necessaries, which is an ordinary Complain in this dead Season, to those that have been wanting in timely forethought; for in earnest,

earnest the Cold fails not to make great Havock in the Gardens of the lazy; and therefore at the very beginning of the Month, how flatteringly fair soever the weather appear, there must be some dry long Dung brought and laid near the *Endive*, *Artichokes*, *Chard Beets*, *Celery*, *Leeks*, *Roots*, &c. that being ready at hand, it may with the more facility in few hours be thrown upon every thing that needs it, to prevent their destruction; and as soon as ever the Cold begins to declare it self, we must begin to cover our *Fig-Trees*.

Now is the proper time to make Plantations of all sorts of *Trees*, and of *Goose-berry*, *Currant*, and *Rasp-berry Shrubs*, and 'tis good to continue on till the end of *March*, unless it be when it Freezes hard, or when the Earth is covered with a great deal of Snow.

During all the same time, we set *Trees* and *Shrubs* in *Baskets*, which we dispose of in some particular place, and especially towards the Northern quarter. We set in them *Standards* as well as *Dwarfs*, keeping an exact account in writing of the order of the several kinds. These *Baskets* are to be placed at half a foot distance one from the other, and must be so well interred, that but just their Brims at most may be discerned above Ground: And we couch in those *Baskets*, such *Trees* as are designed for *Wall-Trees*, just in the same manner as if we were actually planting them by *Walls*, and those which are designed to be planted in the open Air, we place upright in the middle of the *Baskets*.

As soon as the *Frosts* begin to appear, we begin to use the long Dung which we have been careful to order to be brought and laid ready in needfull places; for example, if it be for *Artichokes*, we may keep them a little elevated towards the North, to serve them instead of a small shelter, till we cover them quite, or else if we be pressed with work to be done elsewhere, we cover them presently, always taking care however before we cover them, to cut off all that is withered from them. A little of this Dung serves against the first attacks, but we redouble our coverings as the Cold augments. They which are not provided with that sort of dry Dung, may use instead of it, such dry Leaves as are gathered up in the neighbouring Woods.

If we have a mind to whiten for *Chards* any of the biggest of those *Artichoke* Plants, we tie them below with two or three Bands, and then we wrap them about with long dry Dung, or straw, which we bind over them again, as we have already directed when we were speaking of *Cardons*.

In dry Soils, we earth up a little our *Artichokes*, which would be pernicious in wet Grounds, because it would rot the *Artichoke* Plants.

It is convenient to let the *Artichokes* alone so covered till the full Moon of *March* be past, that being commonly very dangerous; and many Gard'ners are the cause of the loss of their *Artichokes*, when they let themselves be tempted by some fair days in *March*, to take off their coverings quite, and to proceed to manuring them; for if we uncover them, it should at most, be but a little, and we should always have that caution, to leave the Dung close by them, to be ready at hand to cover them again, in case the *Frost* returns.

At the very beginning of the Month, before the *Frosts* be come, we make an end of tying up our *Endive* that is big enough to suffer it, and we cover it with what we can get: we also cover our other *Endive* in the same manner, which we could not tie up. It likewise whitens equally well; and it is very convenient, if we have a conservatory, to plant as many as we can of the biggest of them there, in tufts, as we shall further shew afterwards.

We cut down *Asparagus* stalks when the Seed is Ripe, which we carefully lay up, if we be minded to sow any of them in the following Spring. It would be dangerous to cut those stalks sooner, as well because of spoiling the Seed, as the plants or stocks themselves, which might by that means be irritated to an abortion, and producing before their time, some pitiful sorry little new shoots.

We take the advantage of some fair dry weather, to lay up all we have a mind to keep for our Winters provision; and for that effect, we take up the plants in tufts, with another in the Conservatory, which are for Example, all *Roots*, as *Carrots*, *Parsnips*, and *Beet-raves*, or *Red Beet-Roots*, and *Artichokes*, which have Fruit. The Green ones are more proper for this purpose than the Violet ones, which are more tender and less able to resist the *Frost*, and more apt to putrefie in that part next their stem, than the others which are more rustical and hardy. And also *Spanish Cardons*, *Coltsflowers* and *Endive* or *Succory*, as well the *White*, as the *Wild* sort, and even *Leeks* and *Celery*, though both these

these last will keep well enough in the naked Earth, when they are well covered: But here it is to be noted, that *Celery* when once whitened must be eaten presently, otherwise it would rot; And we must be careful to raise some of it late, that may remain small in the Earth, without being very much covered, which serves for the latter end of February and the Month of March.

Those Persons who live near Woods, will do well to gather up the leaves there, not only to make use of for coverings, as I have said, but likewise to lay them to rot in some hole, the powder of them being very good, and especially to make use of for mold.

We now open and lay bare the Roots of *Trees* that seem to languish, in order to take from about them the old Soil, cut off as much of their Roots as is found in an ill condition, and Earth them up again afterwards with good new Earth.

We make some *Hot Beds* for *Mushrooms*. The method to make them well, is to choose some spot of new, and as near as can be, light and sandy Ground, and dig there a hollow *Bed* of five or six Inches deep, of three or four wide throughout, and of what length we please. The Dung must be either of *Horse*, or *Mule*, and must be already pretty dry, and such as has been piled up some time: Then we make the *Bed* about two foot high, ranking and pressing the Dung as close and tight as we can, yet so disposing it that the upper part of it may be raised into a ridge like the Back of an Ass, that it may the better shoot off the waters to the right and left, which if they should pierce through it, would rot the Dung; after that, we cover the *Bed* to the thickness of two foot more, with the Neighbouring Earth, over which again, we throw another covering of three or four Inches thick of Litter, which in the Winter may guard from the great Cold, and in the Summer, shade from the violent heat the *Mushrooms* which may be expected to shoot up about three or four Months after.

We cleanse *Trees* of Moss that are troubled with it.

They which have great Plantations of *Trees* to prune, should now begin that operation upon those which are least vigorous.

We employ the long dry Dung of which we ought to have made provision in the Summer, to cover our *Fig-Trees*, as well those of the *Wall*, as *Dwarfs*; and for these last, we tie all their Branches as close as we can conveniently, together with Oiler Withs, that we may the more easily wrap them about with this covering; and for the *Wall-Trees*, we endeavour to leave so many of the higher Branches as we can, on the sides, and to tie several of them together to poles or forked sticks that are to serve them for Props, and by that means too, we cover them with more ease, and less charge. We leave on them that covering till the full Moon of *March* be past, at which time, we only take off part of it, till the full Moon of *April* be likewise past, the *Frosts* of these two last Months being dangerous to the young Fruit which then begins to put forth it self, as the *Winter Frosts* are to the Wood which they make to turn all into Pith.

They whose *Pear-Trees* are pestered with *Tiger Babs*, will do well now, not only to gather up the Leaves that are attack'd by them, to burn them immediately, but also to scrape their Branches with the back of a Knife to clear them of the Eggs or Seed of that Curled Insect, which remains sticking to them all Winter, for though we cannot so far prevail that way, as totally to exterminate them, yet however there will be so many Enemies destroyed, as we destroy of those Eggs.

The days being now very short, skilful Gard'ners will therefore work by Candle-light till Supper time, either in making of Straw-Screens and Coverings, or preparing *Trees* for planting, as soon as the Frost permits them, or in designing, &c.

We put those *Trees* into the Earth in furrows which we could not plant, covering up their Roots as carefully as if we were planting them in their designed places, without leaving any hollow Chinks about their Roots, because otherwise the great Frost would spoil them.

We may begin at the latter end of the Month to force such *Asparagus*, as are at least three or four years old, and this forcing is performed, either on the cold *Bed* in the place where they grow, which is the best way, or else upon a *Hot Bed*, if we be minded to remove them. But ordinarily we stay till towards the beginning of the next Month, before we make any Effays of that kind, it being in my Opinion, long enough to have of them for four Months together by Artifice, till Nature be ready to furnish us with more of them for two Months longer by her own sole Virtue and Power, not but that we might begin to force them at the very beginning of September or October.

The way of forcing them is, to dig the Earth out of a Path, to the depth of two Foot, and the breadth of one full foot and a half, if originally the Path were but three Foot over, because there must be at least six or seven good inches of Earth be left next the *Asparagus* Tufts. The Path being thus voided, we fill it up with long hot Dung, very well rammd and trodden down, till it be a full foot higher than the Superficies of the *Cold Bed*, at the first making, and after fifteen days, we flir this Dung over again, mixing some new Dung with it, the better to enable it to communicate sufficient heat to the two adjoining *Cold Beds*, but if it appear too much mortified, so that the *Asparagus* does not shoot up briskly enough, then this recruiting of the path-way with fresh Dung and stirring, must be repeated afterwards as often as it shall be necessary, which commonly happens to be once every ten or twelve days. If there fall any great Rains or Snow, that may have too much rotted that Dung, so that it appears not to retain a sufficient heat, then must it be quite taken away, and all new put in its place; for in fine, this *Bed* must always be kept extremely hot; as to the *Cold Bed*, in which the Plants are, the Ground must be digged up, and stirr'd a little in it, to the depth of about four or five Inches, as soon as the path-way is filled up, for it cannot be done before, because of bringing the Dung to that, (which cannot be done without much trampling on the Soil) which digging being finished, we cover the said *Cold Bed* with some of the same long Dung, to the thickness of three or four Inches, and at the end of fifteen days, so much time at least being necessary to give activity to those *Asparagus* Tufts, that in this Season, are as 'twere dead, or at least benumbed with the cold, we lift up the Dung to see whether the *Asparagus* begin to shoot or no, and if they do, at every place where they appear, we clap a *Glass Bell*, which we also take great care to cover close with long Dung, and especially a-nights, to prevent the Frost from penetrating in the least manner in the World, to the *Asparagus*, which being so extremely tender and delicate as 'tis, would be absolutely spoiled by the least breath of Cold. If in the day time, the Sun shine out a little bright, we must not fail to take off the Dung from the Bells, that the *Asparagus* may be visited by those kindly Beams that animate all things, and if besides those Bells, we had likewise *Glass Frames* to clap over them, and so doubly to cover whole Beds of Plants, that would still be more commodious and more advantageous for bringing to effect this little *Master-piece* of our Art. By these helps, the *Asparagus* springing out of that warm Earth, and meeting with a warm Air under those *Bells*, grow red and green, and of the same thickness and length as those of the Months of *April* and *May*; nay, and prove a great deal better too, because they have not only been unattack'd by the injuries of the Air, but have attained their perfection in much less time than the others, and I can without vanity affirm, that I was the first that by the inducement of some very plausible Reasons, devised this expedient, to oblige the greatest King in the World, with a Pleasure before to him unknown.

I add here, that a *Bed* of *Asparagus* dextrously forced, and well maintained, produces abundantly enough for a Fortnight or three Weeks, and that because the King should not want during the whole Winter, this new Dish which he beholds with so gracious an Eye, as soon as the first *Beds* begin to furnish him, I begin to force as many new ones, and so continue the same course every three Weeks, till the end of *April*, when Nature advertises me, that 'tis time to put an end to those Violences I have done Her, and that she is then willing in her Turn, to serve us some Dishes prepared by her own skill.

I can likewise tell you, that though my *Beds* are but fifteen Toises or Fathoms long, and that I force but six at a time, yet there is spent on them each time, at least fifty Cart loads of Dung, and that the only Vexation I meet with in this Work, is to see an infinite number of *Glass Bells* broke with covering and uncovering them every day, in spite of all the care I can take to prevent it.

We may likewise remove old *Asparagus* Plants out of *Cold Beds* into *Hot ones*, it being true that they spring there, but they never prove so fair as the others, and are attended besides with this inconvenience, that they die there in a very short time.

We force *Sorrel* and *Wild Endive*, or *Succory*, *Macedonian Parsly* or *Allfanders*, &c. in the same manner as we do *Asparagus*, but most commonly it is done rather upon *Hot Beds*, than on the naked Earth, and the Success is very speedy and infallible, and particularly in procuring in one fifteen days time, *Sorrel* that is as fair as that of the Month of *May*.

We should have finished our last manuring of dry Grounds the fifteenth day of this Month, as well to render them impenetrable to the Rain and Snow waters, as to destroy the Weeds, and to make our Gardens appear something neat and handsome.

We

We preserve in their places, or rather we transplant in Turfs, such *Cabbages* as we design for Seed; and if in the Month of *April*, we perceive they meet with any difficulty in making their way, we must help them by giving the *Cabbage* a cut cross-wise on the Head pretty deep, by which means the Seed stem will the more easily pass. We do the same thing in *May* to some sorts of *Cabbage Lettuce*, which have much ado otherwise to run up to Seed.

To have *Radishes* betimes, that is, towards *Christmas*, or *Candlemas*, we sow them in *Hot Beds* about the middle of *November*. I have already laid down directions for the making of *Hot Beds*, in the works of *February*: That which is particularly to be observed for *Radishes*, is that we must beat down with a board, the Superficies of the mold, to render it a little solid, and to prevent it from rowling into the holes that are to be made to Sow the *Radishes* in, after which, that the *Bed* may be handfomly Sown, we take a cord rubbed with *Plaster*, or *Chalk*, or other white matter, and holding it well stretched out between two of us, we mark out with it as many white lines, at three or four Inches distance one from another, both throughout the whole length and breadth of the *Beds*, as its extent will permit, and then with a round wooden planting stick of a full Inch thick, we make holes all along every line at the like distance of three or four Inches one from another, and we put only three *Radish* Seeds into every hole, and if we chance to let fall any more we pull up all the *Radishes* that come up above the number of three. They which observe not to mark out such lines, but make their holes by random-light only, have their *Beds* not so handsome, and they which make their holes nearer, and which leave more than three *Radishes* in a hole, run the hazard of having *Radishes* with a great many leaves and but little Root, there are many *Market Gard'ners* whose practise it is, to Sow lines or rows of *Lettuces* in *February* and *March*, a cross their *Beds* of *Radishes*, but then the holes must be made at the distance of seven or eight Inches; and the *Lettuces* thus sown in lines, will be gathered and spent, before the *Radishes* are fit to gather.

If it freezes very hard we cover the *Hot Bed*, with long steeped Straw, for five or six days, besides which, for its further defence against the rigours of the *Winter*, we cover them with *Straw-Screens* or coverings, supported upon *Traverse Frames* or *Cradles* composed of Stakes, or other Poles of Wood, placed very near the Superficies of the mold, and we stop the sides close up, and if the *Frost* increase notably, we put a new load of long dung over those *Straw-Screens*, but if it be but moderate, there will need no other covering, the heat of the *Bed* being sufficient to defend the Plants; *Radishes* thus sown come up in five or six days, and if the holes had not some Air, they would be smoothed and grow dwindling in piercing through the small Straw.

We must not fail at the beginning of this Month, to take up in Turf, the *Celery* which we had planted at a reasonable distance, in the Months of *June* and *July*, in particular *Cold Beds*; and when we have taken it up, to carry it into the *Conservatory*, or else to replant it in some other *Cold Bed*, placing its Plants very close together, that they may the more easily be covered.

As soon as the White Frosts seem to be settled, we must cover our *Winter-Lettuces* which are planted in well sheltered places, but not with dry Dung as other Plants, for fear some of the filth should get into the heart of those that *Cabbage*, but with very clean Straw, upon which we lay some long pole of Wood, to keep it in its place, and hinder the wind from blowing it off.

## Works to be done in December.

IF it be a pertinent caution I have given at the beginning of every Month, That we ought then to be careful to finish what we could not do in the preceeding Month, it is particularly necessary to repeat it at the beginning of this Month, with respect to that which last expired. As soon as *December* is come it is no longer time to dally. For now the Earth in *Gardens* is quite strip'd of all its usual ornaments, and the *Frost* that seldom fails to signalize it self this Month, without respecting the quality of their Masters, spares no bodies *Gardens*, but unmercifully destroys all it meets with of a nature too delicate to endure its rigour; and therefore it concerns us now to make an end of houlting and of covering what we could not house or cover in the Month of *November*, viz. *Endive*, *Cardons*, *Celery*, *Artichokes*, *Roots*, *Callsflowers*, *Chard-Beets*, *Leeks*, *Fig-Trees*, &c. And above all things, we must be careful to preserve those *Novelties* which we may have begun to advance by Art, as *Pears*, *Beams*, *Cabbage*, *Lettuce*, and little *Sallers*,

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to avoid the displeasure of seeing perish in one bitter Night, what we have been labouring two or three Months to advance.

We may likewise still at the beginning of the Month, continue to sow some early *Pears*, upon some banks made of Earth raised in double slopes along by some Wall placed in a good *Exposition*, and especially that towards the *South*.

We transport our rotten Dung to those places we design to muck, and spread them abroad there, that the rain and Snow waters may the better penetrate them, and carry their Salt a little below the *Superficies* of the Earth where our Seeds are to be sown.

We inter our *Almonds* in some *Basket*, to sprout. They should have sprouted by the Month of *March*, to be ready then to be planted in their allotted places. It is convenient to prevent the great Frost from coming at them; for which end the *Baskets* must be housed up in the *Conservatory*, or else well covered with long Dung if left in the naked Earth. The way to lay these *Almonds* to sprout, is first to lay at the bottom of the *Basket*, a layer of Sand, Earth or mold, or made Earth between two and three Inches thick, and to lay a Layer of flat *Almonds*, upon it with their sharp ends inwards, till its first layer of Earth be quite covered with the layer of *Almonds*, upon which we lay a second layer of Mold or Sand of two Inches thick, and then upon that again a second layer of *Almonds* placed in the same manner as the first, and so a third and fourth, &c. till the *Basket* will hold no more.

It is likewise not amiss to put one single layer of *Almonds* into the naked-Earth, and to cover them with Earth, to the thickness of about three Inches: When they begin to come up at the latter end of *April*, we take them in up *Tinfs*, that is, with some Earth hanging to them, and breaking off their sprouts, we replant them in their designed places, in rows distant one from another, a foot and a half, and in those rows, the *Almonds* must be placed at the distance of half a foot from each other.

We are busie in making trails for *Wall-Trees*.

We may prune *Trees* as long as there is no Icicles, or hoar upon the Branches, and as the hard Frosts do not rain, for they harden the Wood so that the pruning knife cannot easily pass: Always observing that we must never prune *Wall-Trees* without unailing them, because it would be too troublesome to do it otherwise, neither can we so well discern what Work we are to do.

One of the most principal Works of this Month, is, at the beginning of it, to make a *Hot Bed* of long new Dung of the ordinary breadth of four foot, and height of three, and as soon as its great heat is spent, we must sow upon it, under *Glass Bells*, some good bright *Curled Lettuce*, and as soon as 'tis grown a little big, which usually happens in a Month's time, we must take up the fairest, and plant it in a *Nursery* upon another *Hot Bed*, and under other *Bells*, to the number of twenty, or twenty five under every *Bell*, and when they are grown reasonably big there too, we must take up the biggest with a little Earth about them, to replant them to the number of five or six under each *Bell*, to remain there till they be quite *Cabbaged*, which usually happens towards the latter end of *March*, and we take care to fence them well from the Cold, as well with coverings of Litter, as by new heating their *Beds*.

We practise the same method in sowing these *Lettuces* in the Month of *January*, and in replanting in *February*, that we may have some ready betimes, that is, towards the end of *March*, and to continue so doing till the Earth produces us some of her self, without the help of *Hot Dung*. At this time they that employ themselves in rearing *Novelties*, spend the most part of each day in covering them at night, and uncovering them in the morning, or else all comes to nothing.

When in the Winter time, we are raising and forcing of *Lettuce* upon *Hot Beds*, and under *Bells*, we must be careful often to lift up the *Bells*, to take away the dead Leaves, there being a great many that rot and perish, and one rotten Leaf rots others. The inside of the *Bells* must also be cleaned from the filth and moisture that gathers there in abundance, and when there comes a fair Sun shiny day, we must not fail to lift up the *Bells*, that the moisture may be dried up that sticks about the Leaves. But the chiefest thing to be observed above all, is to keep the *Beds* moderately hot, by recruiting and new heating, and fermenting them from time to time.

Provisi-

## Provisions and Products we may have from our Gardens in the Month of January.

BESIDES the good *Pears* following, viz. *Lefschafferies*, *Ambrett*, *Thorn Pears*, *St. Germain*, *Dry Martins*, *Virgoulees*, and *Winter Boncretiens*, &c. and these good *Apples*, viz. *Calville*, *Pippins*, *Api's*, *Courpendu's*, or short stalkt *Apples*, *Fenneleets*, or *Fennel-Apples*, &c. And lastly, besides some sorts of *Grapes*, as the ordinary *Muscat*, the long *Muscat*, the *Chaffald's*, &c. every Person may have *Artichokes*, &c.

All sorts of *Roots*, as *Beet-roots*, or *Red Beet-Roots*, *Scorzonera's*, *Carrots*, *Fenlips*, common *Salsifies*, or *Goat's Beard*, *Turneps*, &c.

*Spanish Cardons*, and Chards of *Artichokes* whitened.

*Cellery* whitened.

*Macedonian Parsly* or *Alfanders* whitened.

*Fennel*, *Anis*, and *Endive*, as well that which is called the *White*, as that which is called *Wild*, or *Succory*.

*Collyflowers*, &c. All these things must have been brought into the *Conservatory* in the Months of *November* and *December*, and ordered as I have directed in speaking of the Works to be done in those two Months.

Besides which, we have also *Pascaliers*, *Milan*, and *Bright*, or large sided *Cabbages*.

These sorts of *Cabbages* are not carried into the *Conservatory*: on the contrary, they must be Frost-bitten in the open Air, to make them tender and delicate.

We may also have some *Citruls* or *Pumpions*, and some *Potirons*, or flat *Pumpions*, by the help of a *Conservatory*.

We may have also pickled *Cucumbers*, pickled *Purslain*, pickled *Mushrooms*, and pickled *Capucin Capers*, or *Nasturces*.

We may have *Onions*, *Garlick* and *Shalots*, out of the *Conservatory*.

We may have *Leeks*, *Ciboules*, *Burnet*, *Chervil*, *Parsly* and *Alleluia*, or *Wood-Sorrel*, &c. We may have very good Reddish Green *Asparagus*, which are better than those that grow naturally in *April*, and all the Month of *May*.

And by the help of *Hot Beds*, or heated Path-ways, we may have very fine *Sorrel*, as well of the round as long sort, and little *Sallets* of *Lettuce* to cut, with their Furnitures of *Mint*, *Tarragon*, *Garden-Cresses*, tender *Chervil*, &c. and *Parsly*, *Borage*, *Bugloss*, &c.

We may likewise have little *Radishes* upon *Hot Beds*, provided the abundance of Snow, and the rigour of the Frosts be not so terrible great, that we cannot for so much as a few hours in a day, uncover the *Beds* on which they are, nor give them any new Recruits of heat, without which, all that is planted of this sort, on *Hot Beds*, is subject to grow yellow, and come to nothing.

We may likewise have *Mushrooms* upon *Hot Beds* made on purpose for that effect, and which are kept carefully covered with long dry Dung, to prevent the hard Frosts from spoiling them.

We have now naturally but few Flowers, except those of *Laurel-Time*, or *Laurus Thymus*, and *Snow drops*, but by the help of *Hot Beds*, we may have some single *Anemones*, *Winter Narcissus's*, and *Narcissus's* of *Constantinople*, *Crocus's*, &c. And we have now *Laurel Rose-leaves* to garnish the Dishes we serve up to Table.

## Provisions and Products of February.

THE Weather usually begins to grow a little milder this Month, so that as to Flowers, we may now naturally by the favour of a good Shelter and a good *Exposition*, have of all those sorts which I told you in my Discourse of the Products of the last Month, might be raised by forcing on *Hot Beds*. Besides which, we may have some *Primroses*, and the heat of the *Hot Beds* may even produce us some *Tulips*, and *Tous Alou's*.

But in respect of Kitchen-plants, we have as yet only those things which we have before mentioned; that is to say, we continue to spend the Stock we have in the *Conservatory* or *Store-house*, and what we raise by the assistance of our *Hot Beds*, and artificial heatings, as little *Sallets*, *Sorrel*, *Radishes*, *Asparagus*, &c.

Provi-

## Provisions and Products of March.

**W**E have now upon our Hot Beds, abundance of *Radishes*, and little *Sallets*, and of *Sorrel*, and Cabbage Lettuces under Bells, which are the *bright curled Lettuces* sown in *November* and *December*, and afterwards transplanted into other Hot Beds. The other sorts of *Lettuces* will not come to any thing under Bells.

We continue to have forced *Asparagus*, and to spend what we had laid up in the *Conservatory*, as *Cardons*, *Coliflowers*, &c.

As to *Flowers*, if the cold be not extraordinary violent, we have every where, and that naturally, all those sorts which blow only in good Expositions in the preceding Months, besides which, we have *Violets*, *Jacinths*, *Past-tours*, and single *Anemonies*.

And towards the end of the Month, we have *English Narcissus's*, *Narcissus's* of *Algers*, *English Iris*, or *Flower-de-Luces*, yellow *Stock-Gilliflowers*, *Noneluch Narcissus's*, single and double *Hepatica's*, as well of the Red, as of the pale Violet Sort, *Hellebore Flowers*, some single *Junquils*, of which we sometimes compose double ones, by putting the Leaves of two or three into one Button.

And we need not now force any *Flowers*, unless it be single or double *Junquils*, if the Weather be very hard.

And if the weather be very mild, we have double *Anemonies*, *Bears Ears*, *Fritillaria's*, some Spring *Tulips*, *Daisies*, *Flammies*, or *Flame-flowers*, *Persian Iris*, and *Junquils* at the latter end of the Month.

## Provisions and Products of April.

**W**E have now abundance of *Radishes*, *Spinage*, and *Sallets* with their *Furnitures*, and other edible Herbs.

We have likewise at the very beginning of the Month, bright curled Cabbage Lettuces, if we have taken care to raise any upon Hot Beds, otherwise we have none, for the Winter *Lettuces* are not as yet Cabbaged.

We have also at the very beginning of the Month some *Strawberries* by the extraordinary help of our Hot Beds, and *Glass Frames*, if we have had the Will, or convenience to make use of them.

We have *Asparagus* produced naturally and without Artifice.

We have an infinite number of *Flowers*, as *Anemonies*, *Ranunculus's* or *Crem foots*, *Imperials*, *Narcissus* of *Constantinople*, *English Narcissus*, and *Algers Narcissus*, white *Narcissus*, *Prim-Roses*, *Violets*, *Hepatica's*, both red and pale blue, and about the end of the Month we have fair *Tulips*.

## Provisions and Products of May.

**I**T is now the time of the flourishing Reign of all sorts of *Verdures* and *Green things*, and of *Sallets*, *Radishes*, *Asparagus*, and *Cucumbers* as to their plenty and abundance. *Pears* and *Strawberries* now begin to come in, and we may and ought to have of those sorts of Long *Lettuces* call'd *Alsinges*, and white *Chicons*, provided we have had timely care to raise some upon Hot Beds, and early to transplant them, either in other Hot Beds, or else in the naked Earth in some well exposed place.

We have an infinity of all sorts of *Flowers*, *Tulips*, *Stock-gilliflowers* of all colours, *Prim-roses* both deep blue and pale blue, *Musaris*, *Daisies*, *Flammies*, Spring *Honey-Suckles*, *Roses* of *Guedres*, single *Anemonies*, &c.

We begin to have *Orange Flowers* as soon as ever the *Orange-Trees*, are brought out of their *Conservatories* about the middle of May.

We have also both single and double *Narcissus's*, and *Peonies* both of the *Fisht*, or *Carnation*, and of the very red colour.

We begin likewise to have some Spring *Lark's Heels*.

We have the *Flower* of the *Trifolium Arvenum*, or yellow *Trefoil*, growing on a shrub, and both the Common and *Persian Lilac*, *Mary-golds*, and *Sedums*, otherwise call'd *Palmaria*, and *Musk'd white Stock Gilliflowers*, both single and double, that is to say,

say, the *Julians*. As likewise *Columbines*, *Veronica's*, or *Fluellins*, plumed or panached *Jacinths*, yellow *Martagons*, with their *Flame coloured Pendant*, *Spanish Carnations*, &c.

Towards the end of the Month, we begin to have abundance of *Strawberries*, and some early *Cherries*.

## Provisions and Products of June.

**W**E have now abundance of all sorts of red *Fruits*, as *Strawberries*, *Currants*, *Gosberries*, *Cherries*, and *Bigarot's* or *Heart-Cherries*, &c.

Some *Pears*, and particularly little *Muscats*.

We have upon the plain and natural Earth, all sorts of *Sallets* with their *Furnitures*.

Abundance of all sorts of *Kitchen Herbs*.

Abundance of *Artichokes* and *Beet-Chards*.

Great store of *Peas*, and of *Garden*, and *French Beans*.

Great store of *Mushrooms* and *Cucumbers*.

At the end of the Month, we begin to have some *Verjuice Grapes*, and *White Endives*.

We have also great plenty of fine, or sweet and strong scented, or Aromatick Herbs, viz. *Time*, *Sage*, *Savory*, *Hyssop*, *Lavender*, &c. And also of Medicinal Herbs.

We have *Roman Lettuces*, and white *Alsinge Lettuces*, and abundance of *Genua Lettuces*.

We have *Purslain*.

We have abundance of *Flowers*, as well to garnish Dishes, as to set out *Flower-pots*, viz. Double *Poppies* of all colours, white, pale, violet, flesh-coloured, or *Carnation*, flame coloured, purple, violet colour'd, and panached or striped; yellow, and violet panics, *Larks Heels*, *Julians*, *Fraxilenes*, or *Fraxinella's*, or *Bastard Dittanies*, *Roses* of all sorts, viz. double, panached or striped, double *Eglantines*, or *Dog-roses*, *Roses* of *Guedres*, *Cinnamon Roses*, white *Lillies*, yellow *Lillies*, *Matricaria's*, or *Feather-few's*, *Asphodel* or *Asphondel Lillies*, *Calves-florets*, *Virga Aurea*, or *Golden Rod*, of *Jassie Flowers* of two colours, *Gladiolus's*, *Veronica's*, or *Fluellins*, *Spanish Carnations*, *Mignards*, *Verbascums*, or *Mullein Flowers*, double *Coqueriers*.

*Thlaspi* or *Treacle Mustard* of two sorts, the great and little *Muscipula's*, *Valerians*, *Toute-Bonnes*, or *Algoods*, or *Good Harries*, *Poets Gillyflowers*, both the white and *Carnations*, yellow *Willow Herbs*, or *Loose-strifes*, *Lady-Gloves*; and towards the middle of *June*, *Roman Chervil*, *Orange Flowers*, *Tuberoses*, single *Anemonies*, *Mignardises*, and *Marine*, or *Sea violets*.

We have still very fine *Pippins*.

We begin to see some *Cabbages*.

We have likewise some *Musk-melons* at the latter end of the Month, and some very fine *Carnations*, and double *Jerusalem Cressies*.

## Provisions and Products of July.

**W**E have in this Month abundance of *Artichokes*, *Cherries*, *Griots*, or *Agriots*, and *Bigarot's*, or *Heart Cherries*.

Plenty of *Strawberries*, *Peas* and *Beans*.

Great store of *Cabbages*, *Musk-melons*, *Cucumbers*, and all sorts of *Sallets*.

Some white *Endive*, and some *Radishes*.

Some *Plums*, viz. the yellow *Plum*, and the *Ceriset*, or little *Cherry-plum*.

Some *Summer Calvill-apples*.

A great many *Pears*, viz. *Maudlin-Pears*, *Cuisse Madams*, or *Lady Thighs*, Great

*Blanquets*, or great *White Pears*, *Orange-green Pears*, &c.

About the middle or latter end of *July*, we have the first *Figs*.

We have *Peas* and *Beans* of two sorts.

We have *Radishes*, and

Abundance of *Musk-melons* towards the middle of the Month.

We have *Verjuice*.

As for Flowers, we have still a great many, and the most part of them I have mentioned in the preceeding Month.

We have besides them, *Geranium Noctolens*, or Night smelling Cranes-bill, *Rue* with its Olive-colour'd Flower, *Jerusalem Cresset*, both single and double, *Clovens*, *Indian Haricots*, or *Kidney-Beans*, of a flame colour, which last till November, *Cyanus*, or *Dog*, or *Corn-flowers*, both white, and pale violet, *Capucins*, or *Nasturces*, *Camomils*, *Staphysagria*, or *Staves-acre*, and towards the middle of *July*, *Clove-gillflowers* and *Carnations* begin to come in.

### Provisions and Products of August.

WE have at this time abundance of Summer *Pears*, and of *Plums*, and of some sort of *Peaches*, as *Maudlin*, *Minion*, and *Bourdin Peaches*, &c. As also of white *Endive*.

Plenty of *Figs*.

Great store of *Musk-melons* and *Cucumbers*.

We have also some *Citruls* or *Pumpions*.

A great many *Cabbages*.

We have *Verjuice*.

We continue still to have all sorts of green Herbs, all Kitchen-Roots, and Onions, *Garlick* and *Shalots*. As also,

Abundance of *Larky-Heels*, *Indian Rofes*, and *Indian Gilliflowers*, or *French Marigolds*, great store of *Musked Rofes*, *Monthly Rofes*, *Jasmin*, *Latter Larky-Heels*, *Tuberofes*, *Matricaria's*, and greater or lesser *Thlaspi's*, and besides them, *Sun-flowers*, *Asters*, or *Oculus Christi's*, &c.

### Provisions and Products of September.

WE have now abundance of *Violet Peaches*, *Admirables*, *Purple*, *Perfick Peaches*, &c.

Great store of *Ruffelet*, or *Ruffet Pears*, melting *Pears* of *Breit*, some *Butter-Pears*, &c.

Plenty of *Endive*, and of *Succory*, and of *Cabbages*.

Towards the end of the Month begins to come in abundance of second *Figs*.

At the latter end of the Month we have likewise some *Spanish Cardons*, some *Artichoke Chards*, some *Cellery Stocks*, a great many *Citruls*, or *Pumpions*, store of *Artichokes*, and some *Musk-melons* still.

Some *Collyflowers*.

We begin to have some good *Muscat Grapes*.

We have *Vine Leaves* to garnish our *Dishes*.

We have *Verjuice*.

And some *Oranges*.

As to Flowers, we have now great store of *Tuberofes*, *Asters*, or *Oculus Christi's*, of *Flower gentles*, *Velvet Flowers*, or *Amaranthus*, of *Indian Gilliflowers*, or *French Marigolds*, of *Indian Rofes*, *Marvels of Peru*, *Tricolor Volubilis*, *Lawrel*, or *Bay Rofes*, both white and *Carnation*, *Ultramarine Rofes*, *Ordinary Stock-Gilliflowers*, both of the white and violet Sorts, &c. *Ciclamens*, and some *Orange-Flowers*, with single *Anemonies*.

### Provisions and Products of October.

VVE have abundance of second *Figs*.

Plenty of *Muscat* and *Chasseld's Grapes*.

Great store of *Butter Pears*, *Doyennee*, or *Dean-Pears*, *Bergamots*, *Vine-Pears*, *Langsac*, *Crasans*, and *Messier-Jolms*.

Abundance of *Endive* and *Succory*, *Cardons*, *Artichoke-Chards*, *Beet-Chards*, *Mustbrooms*, and *Cucumbers*, and still some *Musk-melons* too, if there have been no hard *Frosts*.

We have all manner of green *Pot-Herbs*, *Sorrel*, *Beets*, *Chervil*, *Parsly*, and *Ciboules*, *Roots*, *Garlick*, *Onions*, and *Shalots*.

Great store of *Peaches*, viz. *Admirables*, *Nivets*, *White Andillies*, *Latter Violet Peaches*, *Yellow latter Peaches*, *Rambouillet*, and *Cadillac Pavies*, or *Baillard Peaches*, *Yellow Pavies*, and *Red Pavies*.

*Spinage*,

*Spinage* and latter *Peas*.

For Flowers, we have single *Anemonies*, *Tuberofes*, *Lawrel*, *Time*, *Flowers*, *Velvet Flowers*, *Jasmin*, *Lawrel-Rofes*, *Ciclamens*, &c.

### Provisions and Products of November.

VVE have still in the beginning of the Month, some *Figs*, and some latter *Yellow Pavies*.

We have *Winter Thorn Pears*, *Bergamots*, *Marchionesses*, *Messier Jolms*, *Crasans*, *Perinins*, some *Virgoule Pears*, *Ambrets*, *Leschasseries*, *Amadots*, &c.

We have *Artichokes*.

We have abundance of *Autumnal Calvil Apples*, and some *white Calvils*.

The *Fennellets* or *Fennel Apples*, and *Courpendu's*, or short stalk *Apples* begin also to ripen.

We have *Spinage*, *Endive* and *Succory*, *Cellery*, *Lettuces*, *Sallets*, and *Pot Herbs*, and *Cabbages* of all sorts, and *Roots* and *Pumpions*.

For Flowers, we have almost the same as in the foregoing Month, as also some beginnings of *Thlaspi semper virens*, or ever green *Thlaspi*.

### Provisions and Products of December.

BY the assistance of our Store-house and Conservatory, we have all the same things that we already mentioned in the Month of November.

We may also now begin to have some forced *Asparagus*; And,

Some very green and tall *Sorrel*, in spite of the hardest *Frosts*.

We have *Spinage*.

We have *Winter Cabbages*, as well of the *bright* and *long-sided* sort, which are the most delicate, as of the *green* sort.

We have abundance of *Virgoule Pears*, *Thorn Pears*, *Ambrets*, *St. Germans*, *Dry Martins*, *Portal Pears*, &c. As also,

Of *Api Apples*, *Pippins*, *Courpendu's*, *Fennellets*, or *Fennel Apples*, and some *Calvils* too still, &c.

As to Flowers, we have store of *Lawrel*, *Time*, *Flowers*, and we have some *Anemonies* and *Ciclamens*.

## CHAP. IV.

*How to judge certainly by viewing and visiting a Kitchen-Garden, whether there be any thing wanting in it, which it should be stocked with.*

IT is no inconsiderable thing to understand certainly, not only what Provisions a Kitchen-Garden well maintained and ordered may furnish us with every Month in the Year, but likewise what works are to be done there in every Season, by an able Gard'ner, but yet that is not enough to make a Gentleman so knowing, as to be able to give himself the Pleasure to judge certainly by viewing of his *Kitchen-Garden*, whether it be indeed so well stocked or no, as to want nothing that it should have. For in fine, we must not expect always actually to find in it all the advantages we are beholding to Gardens for. We know indeed, that it should bring forth a provision for the whole Year, but we know very well too, that it does not bring forth all days in the Year, for example, in the Winter Months we hardly see in it any of its Productions, the most part of them being then carried out of it, and laid up in Store-houses and Conservatories. And besides, among the Plants that are to be seen in it at other times, how many is there which have not then attain'd to their perfection, which yet ought to make a Figure in this Garden, though they require perhaps two or three, and sometimes five or six Months time to arrive to it? Thus it is in the beginning of the Spring, with all Legumes or Edible Plants, and green things, and thus it is too in the Summer, with the principal Fruits of the other Seasons, upon which Consideration, I thought it not impertinent nor unuseful, to shew yet

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a little more particularly wherein consists the excellency and accomplishment of a *Kitchen-Garden*, judging of it according to the proportion of what we ought to find in it every time we go into it, and to give you the more exact and perfect an Idea of it, I will as near as I can, draw you the picture of our Kings, which is in its kind, the greatest that ever was beheld, as its Master is the greatest Prince that ever yet appeared; not, that I exhibit this Picture to engage any Person to copy it, but only to direct them how by the Rules of a just Comparison, and proportion of great things to little, they may take such Measures, as they shall think most accommodated to their own particular conveniences.

January.

I will begin this Chapter with the Month of *January*, as I have done the two next preceding ones, and shall tell you first, That in the Month of *January*, we ought to be very well satisfied with the Garden in Question, if we find in it a reasonable quantity of *Winter Lettuces* planted in Borders by Walls, and covered with long Straw, or Straw Screens. And Secondly, if we find in it some Squares of *Artichokes*, and *Beet-Chards* well covered with long Dung, with the like provision of *Cellery*, *Endive*, *Common Parsly*, and *Macedonian Parsly*, or *Alsanders*, &c. and ordered after the same manner. And in the third place, some *Winter Cabbages*, *Ciboules*, *Sorrel*, and *Sallet* Furnitures, and if these two last be sheltered with some sort of Covering. And if in the fourth place there be some squares of *Asparagus* without any other Artifice, than what is used to warm and force them in their *Cold Beds*, as I do, and have begun to do in *November* and *December*. All other Kitchen-plants must be houled and laid up, as *Roots*, *Onions*, *Cardons*, *Artichokes*, *Collyflowers*, &c. In the fifth place, we may be content if we find the *Fig-Trees* well covered, all places where *Trees* should be, well filled up with *Trees*, or at least, with holes digged, and Trenches prepared, ready for planting them, or the *Roots* of those bared and laid open, that begin to languish, in order to their Cure. Sixthly, if we see Men busie in clearing the Fruit-Trees of Moss, and other filth that Spoils them, and if over and above that, we find there any *Hot Beds* for the Novelties of the Spring time, such as are *Strawberries*, *Radishes*, *Little Sallets*, *Pears*, *Beans*, *Cabbage Lettuces*, *Parsly*, *Cucumbers*, and *Musk-melon* Plantations, &c. If we likewise see some *Fig-Trees* and some other *Trees* forced and advanced by artificial Warmth, what then ought we not to say in praise of the Gard'ner, especially if we find the Walks and Alleys kept neat and clean, and no Garden Tools or Utensils any where neglected?

Having told you what should compose the Beauty of a *Kitchen-Garden* in the Month of *January*, I think it needless to add any Description of what makes it imperfect and disagreeable as well in that Month, as in all the rest of which I shall afterwards treat, because any Body may easily discern of himself, that 'tis just the contrary and reverse of what I have just now specified, that is to say, a want of any thing that should be in it, Negligence, Slovenliness, &c. which we are to look upon as the Monsters of *Kitchen Gardens*.

February.

In the Month of *February*, we must certainly expect to see the beginning of a great Bustling and Activity in Garden works, we should now find the most part of those things flourishing, and grown pretty forward, that we told you were to be raised on *Hot Beds*, in the preceding Month, and if about the latter end of the Month, the Weather appear pretty temperate, and there happen so considerable a Thaw as to promise an end of the great cold, our Gard'ners should then begin to dig and manure the Squares and the Counter Borders prepare the *Cold Beds*, sow those sorts of Seeds that are long coming up as *Parsly*, *Onions*, *Ciboules*, *Leeks*, &c. They must likewise now earnestly mind the pruning of *Trees*, as well *Dwarfs*, as *Wall-Trees*, and palisade or nail up these last for the first time, and particularly they must take care to make *Hot Beds* for the replanting of *Musk-melons* and *Cucumbers*, and for little *Sallets*, *Radishes*, *Cabbage-Lettuces*, &c.

March.

In *March*, when the Sun begins to pleasure us with both indifferently fair, and pretty long days, and nature begins visibly to grow warm and active, our Gard'ners also should with new and fresh vigour, and Application, bestir themselves in all parts of their Gardens, and be seen indefatigably to pursue all the works I have mentioned in the particular Treatise I made on that subject, and which therefore 'tis not necessary to repeat here again; so that if the extent of our Ground be great, and the number of Labourers proportionable, we should have the pleasure with one cast of an Eye to see them digging, making up; sowing, planting, hoeing, weeding, grafting, pruning, &c. for in fine, before the Month be out, the most part of the Ground should be taken up either with Seeds or plants, which are to serve for provision for the whole year. All that was before covered with Dung, ought to be discharged of its coverings, which are now grown hideous, as soon as they cease to be necessary, and every thing ought to breath the free Air, which begins now to cheer both Animals and Plants; we should at this time have at least something to begin to gather

gather, either of *Sallets* or *Radishes*, of the new Season, if the *Hot Beds* of the foregoing Months have not as yet obliged us with that pleasure; But neatness and politeness ought particularly to glitter every where, and serve for a varnish to all the Alleys, and the dressed Grounds, that together with the first dawning of the rising Green that is now springing out of the Womb of the reeking Earth, and the perfumed breath of those Plants which Heavens richer influences have made odoriferous, and the abundance of *Flowers*, which begin to display their beauties on every side, and the harmony of the pretty Birds, which a sort of extraordinary gayety and briskness at this time inspires with amorous prattle, and with melodious Airs to thrive to out-vie each other. This neatness may concur to make a Theater of pleasure universally perfect, which may with irresistible allurements entice the curious to the divertissement of walking in so delicious a place.

In the Month of *April*, we are not to find any thing new to be done in our *Kitchen-Garden*, unless it be an augmentation of *Hot Beds* for *Musk-Melons* and *Cucumbers*. The Earth in them should now be covered almost all over with a new decoration of Infant Plants; Here we should see *Artichokes* rising as 'twere from the dead, and there *Asparagus* piercing the Ground in a thousand places; here we should with pleasure observe the *Cabbage Lettuce* wind up it self into round Balls, and here that multitude of Green Herbs, and *Legumes*, so different in colour, and so various in their shapes; These, these are the Innocent and natural Dainties which there present themselves for the nourishment, and Delicious entertainment of Humane kind. The *Jacinth*, the *Tulip*, the *Anemone*, the *Ranunculus*, and so many other *Flowers*, with what Glories do they not adorn the Gardens where they are? That which is here to be remarked, is only the ordinary maintaining of what is already done and perfected; but that which should most take up our thoughts is the hopes of a future crop of *Fruit*, every one now being eager to run and view the *Trees* that shed their Blossoms, to see whether much *Fruit* knit upon them or no, or else to visit the *Hot Beds* of *Musk-Melons* and *Cucumbers* that seem to have taken well, to see how liberally they are like to recompence them for all the pains bestowed upon them.

When the Month of *May* comes in, what contentment have we not in useful *May-Gardens*; and how great are the sweets of enjoyment which we begin then to taste? We have now no longer occasion to demand why such and such spots of Ground are yet bare, Spanish *Cardons*, *Collyflowers*, *Chard-Beets*, *Cellery*, and even *Artichokes*, and *Cabbage Lettuces*, which were not to appear so early, and for which those places were designed, coming to occupy them at the latter end of *April*, or beginning of this Month, and *Purslain* which because of the delicateness of its temper, had till now been retain'd in the Seed Closet, comes out at this time to gild the Earth, and to offer it self in abundance to pleasure its Master. The *Straw-berries* beginning to come now to maturity open and lead the way to the other *Red Fruits* which are immediately to follow after them: *Green Peas* are ready to satisfy the longing Appetite of the lickerish Palate. *Mistletoes* shoot up in Crowds; and in fine, of all the things contained in the Alphabet I have premised before this Treatise, there is hardly any but *Spingee*, and *Maches*, that slave off the performance of their duty till *August* and *September*, for we may now see some little beginnings even of *Endive*, and if *Hasting* or *Early Cherries* were the first *Fruit* that appeared in this Month of *May*, the *Hasting Apricocks*, the *Little Muscat Pears*, and the *Avant Peaches*, or *Forward Peaches* will not leave them long alone to enjoy the glory of being the sole Riches and Ornaments of our Gardens, all these *Fruits* being now preparing themselves to appear in a very few days; the *Musk-Melons* likewise will not stay long behind them, &c. while the *Cucumbers* with an infinite number both of *Lettuces* and of other Plants, satisfy both our Palates and Necessities, as the *Flowers* together with the *Orange-Trees*, which in *Mid-May* we carry abroad out of their houles, perform likewise their functions in delighting both our Sight and Smell.

The parching heat of the Month of *June*, hinders us indeed from going into our *June-Garden* in the heat of the day, but what charms are there not in going to visit it Morning and Evening, when the cool breathings of a gentle Zephir reign there with Sovereign sway? Now is the Season when we may visibly perceive with our Eyes, all things to grow and thrive, and see a Branch that five or six days before, was not above a foot long, now shot out to three or four. *Leeks* are now planted, and squares covered with Green Herbs, compleat the tapestry; that adorns the Ground the *Vine Flowers* make an end of thoroughly embalming the air which was already all over perfumed with the grateful odour of the *Straw-berries*.

We gather in all parts, and at the same time with profusion distribute all those Plants that are become so beautiful and accomplish'd; we fill up the places again we had disurinish'd, so that there hardly ever remains any part void; and nature now affords no better divertissement than to be amazing us with miracles of fertility, so well assist'd as she is, by the kindly warmth of the Father of Light; only she needs now and then the Auxiliary refreshment of convenient moisture, moisture which the propitious Clouds sometimes abundantly pour down, but which sometimes the Gard'ners Industry too is fain to supply her with in time of need. The Cold Beds and Counterborder: Levelled and adjusted so even to a line, and so well furnish'd with Cabbage-Lettuces, what pleasure do they not afford to behold them? That forest of Artichokes of different colours which appears in a select and particular place, doth it not call out to the curious to come and admire them, and more especially to judge of their goodness and delicacy, whilst they are also passing their opinions of their beauty and abundance? The Purslades and Poles-Hedges so exquisitely well extended, and resounding with the warbling notes of chirping Birds which we pass through in going to this Kitchen-Garden, commence the pleasure of their walk, compleat it at their going back, and inspire them with a longing desire to return again with all convenient speed.

In these two Months of July and August, Kitchen-Gardens should be so richly and happily endowed with whatsoever their condition is capable of, that we may find plenty of all things there both to satisfy the pleasures of the present, and provide for the necessities of the future time, so that let us require of them what we please, they may be as ready to answer as we to make our Demands.

As for example have we a mind to all or any sorts of Herbs, Roots, Sallets, Perfumes, &c. They will immediately furnish us with them; have we a fancy to any *Musk-Melons* those chief and principal Fruits of our Climate? we may smell them a great way off, and need but follow our noses and go and visit them, and stoop and gather them; Would we have any Cucumbers, flat Pumpions, or other Pumpions or Citrulls, Musbrooms, &c. They will present us with store of them; Do our Appetites further crave after Artichokes, or Pears, Plums, Figs, &c. we may be sure to find there a considerable quantity of all those things; or, Have we a mind likewise to have any sweet and Aromatical Herbs, as *Time*, *Sage*, *Savory*, &c. or any relishing Plants, as *Garlick*, *Onions*, *Ciboules*, *Leeks*, *Rocamboles*, or *Spanish Garlick*, &c. There we need not fear to be supplied. Nay, the four or five next preceding Months seem only to have laboured for these two last, so that we may expect all should go well in our Gardens in this season, if we be provided with a good Gard'ner, and which above all things, has the skill to chuse well, and Judgment enough to know how and when to gather. The Carnations now are no small Ornaments to our Gardens; and the Florists now are busie in couching their layers, and forget not to take their Bulbous Roots out of the Earth, to lay them up in places of shelter and security.

If in July and August our Kitchen-Gardens have signalized themselves by their *Musk-Melons*, *Cucumbers*, *Legumes*, and even by their *Plums*, their first *Figs*, and some few *Pears*, &c. we shall see that in the Months of September and October which succeed them, they will shew themselves exceedingly Glorious in the matter of Fruits which will be by the abundance of *Peaches*, *Muscats*, and *Chaffeld's Grapes*, of second *Figs*, and of *Russetts*, *Butter*, *Verte Longue*, or *Long Green*, and *Bergamot Pears*, &c. This being undoubtedly the true Season for Fruits, and the time in the whole year wherein the Country is most frequented.

That moderate temper of the Air which now keeps an agreeable Medium between the great Heat of the Dog-days newly past, and the bitter Cold that is to bring on Winter; this charming moderate temper I say, of the weather, Invites out the inhabitants of the Cities, to make a stally out to go and breathe the free Air of the Countrey, and to assist at the diverting employment of the Vintage, and gathering of Fruits: And the Gardens ought now to surpass in an infinite quantity of all they were accustomed to produce in other Months, nor is it fit now to suffer one speck of Ground to lie idle. For if any square has been newly disurinished, as for example, a *Garlick Onion*, or *Shallot Square*, &c. we should take care to fill it up presently again with *Spinage*, *Maches*, *Chervil*, *Ciboules*, &c. The same course is to be taken with some Beds of Summer Lettuces, which should be succeeded by a great number of *Endive* Plants, *Winter Lettuces*, &c. The Bulbous Roots of Flowers must now be put into the Earth again, to begin to take such new Root as may defend them against the rigours of the approaching Winter.

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The first White Frosts of November that make the Leaves of Trees grow Yellow, and November loosen them from the places where they grew, that thrive up and rot the Leaves of *Endive*, and of the larger *Lettuces*, and that Blacken the *Artichoke* Tops, &c. are as so many cruel, and Dreadful fore-runners, that give us warning of the approach of Winter that common and merciless Enemy of all Vegetation: And therefore we must take care early to secure in our *Conservatory* or store-house, all that is liable to be spoiled by the Cold without-doors, and besides, to cover with long dry Dung, that which we cannot conveniently take out of the Ground, and which yet will run great hazard of perishing without being sheltered with some covering, and so in this kind of hasty breaking up, and removing, I would have every body extraordinary busie in plying their duty, and I would advise our Gard'ner to increase the number of his Labourers, to prevent the damage he is threat'ned with. The prickle Baskets, and Hand-barrows should at this time be plyed with the greatest vigour and diligence, so that there may be always the one going thither and coming away again laden with such things as are to be laid up or hoisted in the store-house or *Conservatory*, and the other filled with Dung, to cover that which is to be left upon the Ground. In a word, I cannot tell how to pardon those that either by imprudence or negligence, let themselves be surprized in such important occasions as this, for I would not have them indulge themselves any rest at all, till all their business be done: I would likewise have the store-house or *Conservatory* well filled, and all things in it placed in a regular order. And I would have the whole Garden put on as 'twere another strange and new kind of clothing, and such a Clothing as at another time would render it ugly and disagreeable. I need not name here of what stuff it must be composed, we may smell well enough, that it must be generally of long Dung.

The Month of December, is still not without standing in need of a great deal of December activity, for it often happens that the preceeding Month proves too short to let us finish all that should be done in it, which must therefore be made an end of in this, and that particularly if the Cold have not yet made all the havoc it is capable of: We must then mind exactly to do all I have directed to be done under the head of the Works of this Month; so that we should expect to see now a great diligence used to prepare the Novelties of the following Spring; to clear the places of old Hot Beds, and to make preparation for the making of new ones with all imaginable expedition, and care taken not only to have a good provision of long Dung, and a great many *Glass-Bells*, but likewise to keep all the *Glass-Frames* in good repair, &c. And here I shall not forget to recommend to those curious persons who are blessed with the means to do it, the care to force *Asparagus*, and to recruit their Beds with new warmth as often as their great heat shall begin to flag. It is a work indeed of no inconsiderable pains and experience, but the pleasure to see growing in the midst of the severest Frost and Snow, abundance of *Asparagus*, both thick, green, and every way most excellent, is great enough to take us off from grudging at our cost or trouble, and it may be truly said, that 'tis a privilege hardly belonging to any but our King, to taste of such a pleasure as that, which is perhaps none of the least which his *Versailles* has afforded him by the care I have had the honour to take of it for that effect; and I may add, that 'tis certainly the only place in the world, where a Ground naturally Cold, backward and unfruitful, was ever seen to be forced to bear in the midst of the hardest Winter, what the best Grounds produce not but in temperate Seasons.

## CHAP. V.

What sort of Ground is Proper to each Legume and Kitchen-Plant.

IT is certain, there are certain sorts of Grounds which want none of the good Qualities required to make them produce in every Season, and for a long time together, all sorts of fair and good Legumes, supposing always, that they be reasonably well cultivated: And there are some that besides that, have the faculty to produce them more early some than others, and they are such Grounds as they commonly call Black Sands, in which is found an equal temper between dry and moist, accompanied with a good exposition, and with an inexhaustible Salt of fertility, rendering them easie to be entred by the spade, and to be penetrated by the rain waters: But on the other hand, it is so less certain that it is rare enough to find any of these perfect sorts of Earth, and that on the contrary

contrary, it is very usual to meet with those that offend either in being too dry, light, and parching, or over moist, heavy and cold, or else by being unfortunately situated, as being some of them too high, some too sloping, and some again too low, and too much in a bottom. Happy are those Gard'ners that meet with those first sorts of Ground that are so admirably well disposed for Cultivation, in which they have hardly ever any bad success to fear, but commonly all manner of good Fortune to expect: on the other side unhappy, or at least much to be pitied are those whose Lot it is to have always some of the great Enemies of Vegetation to combat with, I mean, either great drought, or more especially excessive moisture, because this last, besides that it is always attended with a chilling cold that retards its productions, is likewise apt to rot the greatest part of the Plants, and consequently, it is very difficult to correct, and almost impossible entirely to surmount so great a defect, but it is not altogether so difficult to qualify a dry temper, for provided it be not extreme great, and that we have the convenience of Water to water it, and of Dung to amend and enrich it, we are Masters of two Sovereign and Infallible Remedies, which we must apply for its cure. And so by care and pains we may get the Conquest over those dry and stubborn Lands, and force them to bring forth in abundance all things we shall regularly demand of them.

It follows thence, that when we are to be happy as to meet with those choice good sorts of Ground, we may indifferently both sow and plant every where in them, any sorts of Legumes or Plants whatsoever, with an assured Confidence, that they will prosper there. The only Subjection we are obliged to in such Grounds is, first, to weed much, because they produce abundance of Weeds among the good Herbs, and secondly to be often removing our Legumes, and changing their places, which is an essential point of Practice in all sorts of Gardens, it being not at all convenient to place for two or three times together, the same Vegetables in the same piece of Ground, because the Nature of the Earth requires these sorts of Changes, as being as 'twere assured in this Diversity, to find wherewithall to recruit and perpetuate its first vigour. And though in those good Grounds all things prosper admirably well, yet is it a most undoubted truth, that *Southern* and *Eastern* Expositions are here as well as every where else, more proper than those of the *West* and *North*, to forward, and improve its productions, witness *Strawberries*, *Hasting Peas*, *Cherries* and *Muscad-Grapes*, &c. To balance which, these last Expositions have likewise some peculiar advantages, that make them to be esteemed in their turn; for Example, during the excessive heats of *Summer*, that often scorch up every thing, and make our Legumes and other plants run up too hastily to Seed, they are exempt from those violent impressions, which the Sun makes upon those places that are fully exposed to his burning Rays, and consequently our Plants will maintain themselves longer in good plight in those situations than in the others.

It also follows from hence, that if any Person have Ground, though tolerably good, yet not of an equal goodness all over, either caused by the difference of its natural temper, or situation, and sloping inclination upwards or downwards, that then I say, the skill and industry of the Gard'ner shews it self, by knowing how to allot every plant the place in which it may best come to maturity in every Season, as well in regard of forwardness, and sometimes of Backwardness, as of its outward Beauty, and inward perfection.

Generally speaking, those Grounds that are moderately dry, light, and sandy, and such as though they be a little strong and heavy, are situated on a gentle rising towards the *South* or *West*, and are backed by great Mountains, or fenced by high Walls against the Cold Winds, are more disposed to produce the Novelties of the Spring, than the strong, heavy, fat and moist Sands, but likewise on the other Hand, in Summers when there falls but little Rain, these last produce thicker and better nourish Legumes, and require not such large and frequent Waterings, so that we may find some sort of Consolation and Satisfaction in all sorts of Grounds.

However though absolutely speaking, all things that may enter into a Kitchen-Garden, may grow in all sorts of Grounds that are not altogether barren, yet it has been observed in all times, that all sorts of Earth agree not equally with all sorts of Plants, our able Market Gard'ners in the Neighbourhood of *Paris*, justify the truth of this by a most convincing Experience, for we see that such of them whose Gardens are in Sandy Grounds, seldom mind to plant in them any *Artichokes*, *Collyflowers*, *Beet-Chards*, *Onions*, *Cardons*, *Celery*, *Beet-raves* or *Red Beet-Roots*, and other Roots, &c. as those do that have theirs in stronger and more hearty Lands, and on the contrary, these last employ not their Ground in *Sorrel*, *Purslain*, *Lettuce*, *Endive*, and other small plants that are delicate and subject to perish with Mildew, and the wet rot as do those whose Gardens are in light-  
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From all that I have asserted, there result two things, the first is, that an able Gard'ner which has a pretty dry or hilly Ground to cultivate with an Obligation to have of all sorts of things in his Garden, should place in the moistest parts those plants that require a little moisture to bring them to perfection, as *Artichokes*, *Red Beet-Roots*, *Scorzonerai*, *Saffies*, *Carrots*, *Parfnips*, *Skirrets*, *Beet-Chards*, *Collyflowers* and *Cabbages*; *Spinage*, *Common Peas*, *Beans*, *Currants*, *Gooseberries*, *Raspberries*, *Onions*, *Ciboulets*, *Leeks*, *Parshy*, *Sorrel*, *Radishes*, *Patience* or *Dock-Sorrel*, *Sweet Herbs*, *Borage Bugloss*, &c. And (supposing the Provisions above specified, without which nothing will be lightly, be already planted in its other parts) he should fill up the drier parts of the same Garden with *Lettuces* of all Seasons, *Endive*, *Succory*, *Cheruil*, *Tarragon*, *Basil*, *Burnet*, *Mint*, and other Sallet-Furnitures, and *Purslain*, *Garlick*, *Shalots*, *Winter-Cabbages*, *Hot Beds* of all sorts of Plants, and of little Sallets; he may likewise plant in the same places what *Grapes* he has a mind to, and he must place his *Legumes* there at moderate distances, because they grow not of so large a Size and Stature there, as in fatter places. And lastly, he must keep his Walks and Path-ways higher than his dressed Grounds, as well to draw into these latter the Rain waters that would be but useless and incommodious in the Walks, as to render the artificial waterings he shall be obliged to use, of the greater advantage to them, by preventing them from running out any where aside, which must be one of his principal Applications.

He must also chuse out in the same Grounds those Parts which come the nearest to the good temper between dry and moist, for the raising of *Asparagus*, *Strawberries*, *Cardons*, *Celery*, &c. because these sorts of Plants languish with drowth in places too dry, and perish with rottenness in parts over-moist. He must place in the Borders under his Northern Walls his *Allioid's*, *Latter Strawberries*, and *Bomelais*, or *Perjuice Grapes*, and in the Counter-Borders of the same Northern Quarter, he may make his *Nursery Beds* for *Strawberries*, and sow *Cheruil* all the Summer long, the North side in all sorts of Grounds, being most proper for those purposes. And as this Gard'ner should be curious of Novelties, he ought to look upon the Banks under the Walls towards the South and East to be a marvellous and favourable shelter for the raising them; as for Example, for the procuring of *Strawberries* and early *Peas* at the beginning of *May*, *Violets* at the entrance of *March*, and *Cabbage-Lettuces* at the beginning of *April*. He should likewise plant in the dressed Banks next to the same Eastern and Western Walls, his Nursery of *Cabbages*, and sow there his *Winter Lettuces*, that is, *Shell-Lettuces*, to remain there all Autumn and Winter, till in the Spring it be time to transplant them into the places where they are to come to perfection; He should likewise plant in the Borders of the same Walls, his *Past-pierre*, or *Sampire*, which he can hardly have by any other means, which course is to be followed in all sorts of Gardens; and in the Winter time he should likewise observe this particular caution to throw all the snow off from the neighbouring places upon the dressed Borders of those *Wall-trees*, and especially those of the Eastern Quarter, both for the erecting of a Magazine, as 'twere of moisture in such places upon which the Rain but seldom falls, as upon those in which the violent heat of Summer is like to be of pernicious influence.

The second thing that Results from what I before laid down, is, That the Gard'ner whose Garden is in a very fat and moist Ground, must take a quite contrary method with all his Plants to that just now above mentioned; always assuring himself that those parts of it which are very moist, unless he can find means to drain and render them lighter, will be of no other use to him than to produce noxious Weeds, and consequently, that those which partake the least of that intemperature, whether by their own Nature and Situation, or by the care and industry of the ingenious Gard'ner, are always to be looked upon as the best for all sorts of things. He must place in the driest parts moist of those Plants that keep in their places for several years together, excepting *Currants*, *Gooseberries*, and *Rasperry* Bushes; as for Example, *Asparagus*, *Artichokes*, *Strawberries*, *Wild Endive* or *Succory*, &c. In other places, let him put those things which in Summer receive the least time to come to perfection, viz. *Sallets*, *Peas*, *Beans*, *Radishes*, may and quire the least time to come to perfection, and because all things grow thick and tall in those fat and moist places, therefore he must plant his *Kitchen-plants* there, at greater distances one from the other, than in drier places; he must also keep his Beds and dressed Grounds, raised higher than his Walks and Path-ways, to help to drain out of his Grounds the Water that is hurtful to his Plants, and for that Reason, his *Beds* of *Asparagus*, especially, as likewise his *Strawberry* and *Celery* *Beds*, &c. no more than those of his Sallets must not be made Hollow, as those must be that are made in drier Grounds.

I have had good Success in the new *Kitchen-Garden* at *Vosfailes*, where the Ground is fat, viscous, and as *twere* Clayie, by raising in the midst of it, certain large squares where the frequent Rain Waters in the Summer, of the Year 1682. remained without penetrating above seven or eight Inches deep, and by having given to the said squares by the means of that elevation, a sloping descent on each side, all along the bottom of which I made at the same time some little dikes or water-courses about a foot deep, as well to separate the squares from the Counterborders as particularly to receive the mischievous waters which by staying on the squares, otherwise would ruine all the Plants in them; which waters afterwards discharged themselves into stone gutters which I had purposely ordered to be made to carry them off. I afterwards raised most of the Counterborders in the same manner, Arch-wise, that what water might remain in them might shoot off into the sides of the walks, all along which there were other little dikes almost unperceivable, to receive those waters and convey them into the same stone gutters newly above mentioned; and I can truly affirm, that before I used this precaution, all that I had in those squares, not only of Kitchen-Plants, even to the most rustical and hardy sort of them, as *Artichokes*, *Beer-Chards*, &c. but to the very *Fruit-Trees* were visibly perceived to perish, the Plants with the rot, and the *Trees* with the *Faundice*, besides which mischiefs, the winds easily threw up my *Trees* by the Roots, because they could hardly take any fast hold in that kind of Ground that were grown liquid and soft like new made mortar, or Pap. My foresight and diligence were a great help to me in that case, and I sincerely advise all those that shall have to do with places of the like difficulty, to use the same method, if they can find out no better expedient.

The reasoning by which I was induced to this way of proceeding, was this: That though the excessive quantity of water did reduce that unhappy sort of Ground to a kind of Marsh, and thereby disposed it afterwards by the operation of the great heat to grow as hard as a stone, and consequently rendred it incapable of culture in either of those two states wet, or dry, yet I say, my reason suggested to me, that if I could hinder the first inconvenience which was the rendring of this Ground too Liquid and Marshy, it would be an infallible means to secure me against the second, which was to see them grow hard and stony, because I concluded, that if my Grounds having been once made light and loose, could be kept reasonably dry after that, as they would be if the waters were hindred from lodging in them, they would not be any more so closely glued together as to grow into any such kind of stony consistence, but would become tractable like other Lands; and accordingly I found my reasoning answered by the success which I expected.

#### CHAP. VI.

*What sort of Culture is most proper for every particular Plant.*

IT is a very considerable Advance to have settled a *Garden* upon a good foot at first and to have wisely employed, or at least assigned out all its parts according to the different Qualifications of its Ground, the goodness of its Expositions, the order of the Months, and the nature of each Plant; But that is not all, we must likewise carefully cultivate them, in such a manner as they peculiarly require.

For there is a general Culture of *Kitchen-Gardens*, and there is a particular Culture peculiar to each Plant. As to the general Culture, it is well enough known, that the most necessary and important points of it consist first, in well amending and mucking the Earth, whether it be naturally good or not, because *Kitchen-Plants* exhaust it much; secondly, in keeping it always loose and stirred, either by digging up whole Beds, to Sow or transplant in them, &c. or such other places where the spade may be employed, as for Example, among *Artichokes*, *Cardons*, &c. or by pecking and grubbing up where the closeness of the Plants to one another, will permit us to use only grubbing instruments, as for Example, among *Straw-berries*, *Lettuces*, *Endive*, *Peas*, *Beans*, *Celery*, &c. Thirdly, in watering plentifully all kinds of Plants in very hot weather, and especially in sandy Grounds, for those that are strong and rank require not so much, always observing that in both sorts of Ground, watering is not so necessary for *Asparagus*, nor for borders or edgings of *Time*, *Sage*, *Lavender*, *Hibbop*, *Rue*, *Worm-wood*, &c. which need but little moisture to keep them in good plight; Fourthly, it consists in keeping the

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Superficies of our Ground clear of all sorts of Weeds, either by Weeding, or digging, or by only raking them over, when they have not been long dressed, so that as far as 'tis possible, the Earth may always appear as if it had been newly stirred up.

I shall not insist any longer here upon the head of the General Culture, because it is so well known to all people, but shall only declare my Opinion and the practice of able Gard'ners in that which is peculiarly to be used to each particular plant.

And I shall begin with observing to you, that among *Kitchen-Plants*, there are some that are Sown to remain still in the place where they were first, and others again, only to be transplanted elsewhere; that there are some that prove well both ways; some that are multiplied without Seed, some that are transplanted whole, and some that are cut to be transplanted; that there are some which for the supply of Man-kind, bear several times in a year, and that last longer than a year; others that produce but once in a year, but yet last to bear for several years after; and Lastly some again, that perish after their first production.

The Plants of the first Class, are *Radishes*, almost all *Red Beet-Roots*, *Carrots*, *Parsnips*, *Silverets*, *Turneps*, *Maches*, *Reponces*, *Scorzoner's*, *Saffies*, and besides them, *Garlick*, *Cherail*, *Wild Endive*, or *Succory*, *Harts-Horn Sallet*, *Garden-Cresses*, *Shallots*, *Spinage*, *Beans*, small *Lettuce* to cut, *Parley*, *Burnet*, *Cutting Beets*, *Peas*, *Purslain*, &c. and the greatest part of our *Sorrel*, *Patience* or *Sharp-Leav'd Dock*, *Onions*, and *Ciboulles*.

The Plants of the second Class which succeed not without being transplanted, are *Chard-Beets*, *Celery*, and the greatest part of our *White Endive*, both long and tied, and *Cabbages*, unless they be sown very thin, or be very much thinn'd after they are sown; of this Class are also *Cabbages*, most *Musk-Melons*, and *Cucumbers*, *Citrulls* or *Pumpions*, *Potirons* or flat *Pumpions*, *Leeks*, &c.

Those of the third Class, that is, such as may be indifferently either continued in the places where they are first sown, or transplanted elsewhere, are *Asparagus*, though most commonly they are sown at first in *Nurseries*, to be transplanted a year or two after; as also *Basil*, *Fennel*, *Anis*, *Borage*, *Bugloss*, *Cardons*, *Capucin Capers* or *Nasturties*, *Ciboulles*, *Savory*, *Time*, *Musked Cherail*, &c.

The Plants of the fourth Class that are multiplied without being sown, are *Alluina*, or *Wood-Sorrel*, *English Cives*, *Violets*, &c. Because they grow into thick Tufts which are separated into many; *Artichokes* are propagated by their *Eyes*, *Off-sets*, or *Slips*; *Mint*, and *Round Sorrel*, *Tripe Madame*, *Tarragon*, *Balm*, &c. by their Layers or Branches that take Root where they touch the Earth, the two last of which have also the advantage of multiplying by Seed, as likewise have the *Artichokes* sometimes. *Straw-berries* propagate by their Runners, *Rasp-berries*, *Goose-berries*, and *Currans*, by their *Slips*, or *Suckers*, and by their Cuttings which also take Root. *Lavender*, *Worm-wood*, *Sage*, *Time*, and *Marjoram*, by their Branches which take Root at their joints, and are also multiplied by their Seed; the common *Bays*, both by Layers and Seed too; *Vines*, and *Fig-Trees*, by their *Suckers*, *Hooked Slips*, and Cuttings whether Rooted or not Rooted.

In the fifth place, those Plants of which we cut off some part either of the Leaves or Roots or both at the same time, in order to transplant them, are *Artichokes*, *Chard-Beets*, *Leeks*, *Celery*, &c. And those others whose Leaves we do not cut at all, though it be good always to trim their Roots a little to refresh them, are *Endive*, and *Succory*, most commonly, and *Savory*, *Sorrel*, &c. and all *Lettuces*, *Alluina* or *Wood-Sorrel*, *Violets*, *Basil*, *Arach* or *Orange*, *Borage*, *Bugloss*, *Capucin Capers* or *Nasturties*, *Cabbages*, *Tarragon*, *Samphire*, *Straw-berries*, *Marjoram*, *Musk-Melons*, *Cucumbers*, *Citrulls* or *Pumpions*, *Purslain*, and *Radishes* for Seed, &c.

The Plants that bring forth several times in a year, and yet last for some years following, are *Sorrel*, *Patience* or *Sharp Dock*, *Alluina* or *Wood-Sorrel*, *Burnet*, *Cherail*, *Parley*, *Fennel*, all Edging, or Sweet Herbs, *Wild Endive* or *Succory*, *Macedonian Parsley* or *Alfanders*, *Mint*, *Tarragon*, *Samphire*, &c.

Those that produce but once in the year, but yet last bearing for several years together afterwards, are *Asparagus*, and *Artichokes*.

And Lastly, those that cease to be useful after their first production, are all *Lettuces*; Common *Endive*, *Peas*, *Beans*, *Cardons*, *Melons*, *Cucumbers*, *Citrulls* or *Pumpions*, *Onions*, *Leeks*, *Celery*, *Arach* or *Orange*, and all Plants whose Roots are only in use, as *Red Beets*, *Carrots*, &c.

Now to give you a particular account of the Culture that belongs to every several sort of Plant, I must tell you, that this Culture consists, first, in observing the distances they are to be placed at one from the other; second, in the Timing of such as need it; third,

B b

third, in planting them in that situation, and disposition which they require; fourth, in giving them those assistances which some of them have need of to bring them to perfection, or which are convenient for them, whether it be by tying up, or wrapping about, or Earthing up, or otherwise covering them, &c.

I begin in the ALPHABETICAL Order

## A.

**A**LSANDERS: See Macedonian Parsley.

**Alliaria**, or *Wood-Sorrel*, when it grows old, grows into 'Tufts, and being a Plant that grows in the Woods, and consequently that loves the shade, we therefore plant it along by the sides of our Northern Walls, at the distance of about one foot between one plant and another; the more we strip it of its Leaves, which is one good quality it has, the more fresh ones it shoots forth: It is enough to set it two Inches into the Ground; it lasts three or four years without being renewed, and to renew it, we need do no more than to separate or slip out the great Tufts of it into several little ones, and replant them again immediately, which is to be done in the Months of *March* and *April*; a little watering in very Hot weather, and especially in sandy Grounds, is a very great and welcome help to them.

*Anis* and *Fennel* are commonly sown pretty thin, either in furrows, or borders; their Leaves are used in *Sallets* among other Furnitures. They run to Seed towards the Month of *August*, and when their stalks are cut down, they shoot out new Leaves the next year that are as good as the first, but however it is best to renew them every two years.

*Arrach*, *Orrach*, or *Orange*, is propagated only by Seed, and is both one of the quickest both in coming up, and in running to Seed, which latter it does at the very beginning of *June*. It is sown pretty thin, and to have good Seed of it, we must transplant some plants of it in some separate place. The Leaf of this plant is very good both in pottage, and in stuffings or farces; we use it almost as soon as it peeps out of the Earth, for it passes away very quickly; and to have some the more early, we sow a little quantity of it upon a *Hot Bed*: It thrives well enough in all sorts of Grounds, but yet it grows always fairer in good Grounds than in but indifferent ones.

*Aromatick* or *sweet*, or *spicy Herbs* such as are planted in Edgings of Borders, as *Marjoram*, *Time*, *Sage*, *Rosemary*, &c. See their Culture under the several Titles of each of those particular Herbs.

*Artichokes*, as we have already elsewhere told you, are multiplied by their Eyes, Suckers, Slips, or Off-Sets, which every plant of them usually shoots out every year in the Spring, round about its old Root, and which must be taken off as soon as they are grown big enough, leaving only at each place three of the best and furthest distant one from the other. For the planting them, we commonly make little Trenches, or Pits about half a foot deep, and three foot distant one from another, and filled with Mold, and we place two rows of them regulated by a line, in each Bed, which is to be full four foot broad, and parted from the next Bed by a path-way of one full foot; these Trenches of Pits are to be made at about half a foot's distance from the edge of the Bed, and Checquerwise one towards the other; we place two Slips in a right Line in each space containing between Nine and Ten Inches in Length. We must renew them once every three years at least, cut off their Leaves at the beginning of Winter, and cover them with long dry dung during all the very cold weather till the end of *March*, when we must uncover them, and slip them, if their Slips be yet big enough, or else stay three Weeks or a Month longer till they be, then we must labour and move the Earth well about them, and dung them with the rottenest part of that Dung that served them for a covering; we water them moderately once or twice a Week, till about the end of *May*, their Fruit begins to appear, and from that time we must water them plentifully, that is two or three times a Week, during the whole Summer, allowing half a Pitcher full of Water to each plant, and especially in Grounds naturally dry; those planted in the Spring, should bring their Fruit to perfection in Autumn following, if well watered, and they which do not, ought to yield their first Fruit in the next Spring after, in case they be strong enough to resist the sharpness of the Winter. *Artichokes* have not only the hard weather, and excess of wet to fear, but they have the Field Mice likewise for their Enemies, those mischievous little Animals gnawing their Roots in the Winter-time, when they find nothing better in the Gardens, and for that reason,

reason, it's good to plant one Rank of *Beet-Chards* between two Ranks of *Artichokes*, that the Field-Mice finding the Roots of these last the tender of the two, may fall upon them instead of the others, as they never fail to do. There are three sorts of *Artichokes*, viz. the green, or otherwise white ones, which are the most early, the violet ones, whose Fruit is almost of a pyramidal Figure, and the red ones which are round, and flat like the white ones. The two last sorts are the most delicious.

*Artichoke Chards*. See *Chards*.

*Asparagus* are sown at the beginning of the Spring like other Seeds, that is, they are sown in some Bed well prepared; they must be sown indifferent thin, and raked with an Iron Rake, to cover them with Earth. About a year after, if they be big enough, as they will be, if the Ground be good, and well prepared; or if not, at least at two years end, we must transplant them, which is to be done about the end of *March*, and all the Month of *April*; and for that effect we must have Beds between three and four foot broad, and separated one from the other; if it be in ordinary Ground, we dig these Beds hollow with a good Spade, throwing up the Earth we take out of them upon the Path-ways; and as to strong, heavy and moist Grounds, I would have them ordered as I have done the *Kitchen-Garden* at *Vespailes*, that is to say, I would not have the Beds in them at all laid hollow, but on the contrary, raised and kept higher than the Path-ways, too much wet being mortal to these Plants. *Asparagus* thus sown shoot out Tufts of Roots round about their Eye, or Mother Root; that is to say, round the place from whence all their shoots are to Spring, which Roots spread between two Earths, and in order to transplant them either into a hollow Bed, or a high raised Bed, we bestow a good thorough Tillage on the bottom of the Trench, and if the Ground be not very good, we dung it a little, and afterward we plant two or three stocks of these young Plants, orderly in ranks upon the Superficies of the Bed prepared for them, without needing to trim the extremity of their Roots, or at least, but a very little, and if our intention be, to force these *Asparagus* by an artificial heat, when they are grown big enough, we place them at a foot distance one from the other, and if they be to remain to grow after the usual manner, we allow them at a foot and a half's distance, but in both Cases, we place them Checquerwise, and when they are so placed, we cover them up again with two or three Inches depth of Earth: if any of them fail to Spring up, we may replace them with new ones two or three Months after, which is to be done in the same manner as we planted the others, only taking care to water the new planted ones sometimes during the great heat, and to keep them always well weeded, and well dug about, or else we mark out with little sticks the empty places, and stay till the Spring before we fill them up again. Every year we cover the Bed with a little Earth taken off from the Path-way, because instead of sinking, they always are rising by little and little: we dung them moderately every two years, and let them shoot up the first three or four years without gathering any, till we see them begin to grow pretty thick, and then we may force as many as we please of them, or if not, we continue to gather of them every year a crop for fifteen years, before we need to renew them. Every year about *Martermas*, we cut down all their stems, every stock producing several stems, and take the seed of the fairest of them for Seed, if we would have them come to bear at the time above-mentioned. To draw them out of their *Nursery-Beds*, we use an Iron Fork, the Spade being too dangerous for that work, because it would cut, and hurt those little Plants.

We must not fail every Year at the latter end of *March*, or beginning of *April*, that is, before the *Asparagus* begin to sprout naturally, to bestow a small dressing or stirring of the Ground about three or four Inches deep, on every Bed, taking care not to let the Spade go so deep, as to hurt the Plants; which small dressing serves, both to kill the Weeds and to render the Superficies of the Earth loose, and thereby not only the better to dispose it to drink up the Rain, and the *May-dew* that nourishes the Stocks, but likewise to facilitate the passage of the *Asparagus* in sprouting. The particular and most dreadful Enemies of *Asparagus* are a sort of little Fleas, that fasten upon their shoots, shake them miscreant, and hinder them from thriving; they are most troublesome in very hot and dry years, not appearing at all in other years; there has been no Remedy found yet against this mischief.

## B.

**B**alm, called in *French Melisse*, is an Odoriferous Herb, whose Leaf when tender, makes a part of *Sallet-Furnitures*. It is multiplied both by Seed, and by rooted Branches, like *Lavender*, *Time*, *Hyssop*, &c.

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Basil,

*Basil* is an annual Plant, that is very delicate. We seldom sow it but upon *Hot Beds*, and not in open Ground, as we do *Parslain*, *Lettuce*, &c. We begin to sow some in that manner at the very beginning of *February*, and we may continue so to do the whole year. Its tender Leaves are mixed in a small quantity, with the Furnitures of *Salads*, among which, they make an agreeable perfume; It is likewise used in *Receps*, especially dry ones, for which reason, we take care to keep some for *Winter*. We gather its Seed in the Month of *August*; and usually to make it run to Seed, we transplant it in the Month of *May*, either in Pots, or *Beds*. There are several sorts of it, but that which bears the biggest Leaves, and especially if they incline to a *Violet Colour*, and that which bears the least Leaves, are the two most curious; that which produces milding ones, being the ordinary or Common sort.

The Common *Bay*, or *Bay-Tree*, is a shrub of no very great use in our *Gardens*, and therefore it is enough to have some few Plants of it in some well sheltered place, to gather some Leaves of them when occasion requires.

*Beans*, as well those of the Common, and *Garden* sort, as those called *Kidney-Beans*, and *French-Beans*, and in *French*, *Aricis*, are sown in open Ground, and grow not otherwise; The *Aricis French*, or *Kidney-Beans*, are sown about the latter end of *April*, and all the Month of *May*, and are very sensible of the *Frost*; The Common *Garden Beans* are sown at the same time with *Huffing-Peat*, both in *November*, and in *February*.

*Hot Beds*. See the Works in *November*.

*Bete-raves*, or *Red Beet-Roots*, are annual Plants propagated only by Seed, and are seldom transplanted. They are sown in the Month of *March*, either in *Beds* or *Borders*. They must be sown very thin, or at least if they come up too thick they must be very much thinned, or else they will not grow so fair and large as they should be. They require a very good, and well prepared Ground: They are the best that have the *Reddest* substance and the *Reddest* Tops: They are not good to spend till towards the end of *Autumn*, and all the *Winter* Season. To have Seed of them, we transplant in *March* some of the last years Roots that we have preserved from the *Frost*, their Seed is gathered in the Months of *August* and *September*.

*White*, or *Chard-Beets*: See *Chards*.

*Borage* and *Englefi*, grow and are to be ordered in the same manner as *Arrach*, only they come not up so vigorously. We sow of them several times in the same *Summer*, because their Leaves, in which consists all their excellence, are good only whilst they are tender, that is, while they are young. Their little *Violet Colour'd Flowers* serve to adorn *Salads*. Their Seed falls as soon as 'tis ripe, and therefore must be carefully watch'd: The surest way is to cut down the stalks, and lay them a drying in the *Sun*, as soon as ever the Seeds begin to ripen, and by that means we shall lose but very few.

*Board-la's*, otherwise called *Verjuice*, as well the *White*, as *Red* sort, is a kind of *Vine* which is pruned, and split, or layed, and grafted and planted as other *Vines* are in the Months of *January*, *February*, and *March*. Care must be taken to tie up its Branches, either to props, or some sort of trail, about the middle of *June* at latest, or else the wind destroys it quite: We must also pick and pluck off the weak and unprofitable Branches of these *Vines*; and when we prune them, 'tis enough to leave two, three, or four fair Branches at most upon each stock, and to keep them not above three or four buds long, every one of which usually shoots forth one bearing Branch, with three or four fair Bunches of *Grapes* upon each Branch. My practice is in all sorts of *Vines*, but particularly in the *Muscat* or *Musked* sorts, to keep the lower Branches shorter by two buds, than the highest, to keep the Plant always low, when I would not have them mount up upon a *Traill*.

*Buckhorn-Salats*: See *Hartshorn-Salats*.

*Burnes*, called in *French* *Pimprenelle*, or *Pimpernelle*, is a very Common and ordinary *Salat* furniture, which is seldom sown but in the *Spring*, and is sown thick either in *Beds* or *Borders*.

It often Springs afresh after cutting, of which the youngest shoots must be chosen for *Salats*, the Leaves that are any thing old being too tough. It does it a great deal of good to water it in *Summer*. There is but one sort of it whose Seed is gathered at the end of *Summer*.

C.

C.

*Cabbages* of all sorts of *Kitchen-Plants* take Root again the easiest when transplanted, as they are likewise the most known, and most used of any in our whole *Garden*. They are multiplied by Seed, and are of several sorts and Seasons. There are some called *White*, or headed *Cabbages*, which are for the service of the latter end of *Summer*, and for *Autumn*. There are some Curled, called *Pancaliers*, and *Milan Cabbages*, which produce small headed *Cabbages*, for *Winter*; there are some of a *Red* or *Violet Colour*; and some called long sided *Cabbages*, whereof some are Bright or *White*, and very delicate, ripe in *Vintage* time, and others *Green*, and are not very good till they be *Frost*-bitten. Lastly, there are some called *Choux Fleurs*, i. e. *Cabbage Flowers*, and by the English *Coliflowers*, which are the most noble and valuable of them all, and are not used in pottage, but in choice intermeffes; they cannot endure the *Frost*, and therefore as soon as they begin to form their heads, they must be covered with their Leaves tied up for that end over them, with *Straw* bands, to guard them from the insults of the Cold that spoil and rot them. They are for our *Winter* spending, and must be sheltered in the *Green* house or *Conseratory*, whither they must be carried and there planted with a turf of their old Earth, about them, where they commonly are used to perfect the full growth of their heads. All other *Cabbage-Plants* yield Seed in *France*, but only these, whose Seed we are fain to have brought up from the *Eastern* Countries, which makes them ordinarily very dear. To make *Cabbages* run to Seed, we use every year either in *Autumn* or *Spring* to transplant some of the best and fairest of them, which run to Seed in the Months of *May* and *June*, that is gathered in *July* and *August*.

You are by the way to remark two things; The first is, that all thick Plants that run to Seed, and grow pretty high, as *Cabbages*, *Leeks*, *Ciboules*, *Onions*, *Red Beet-Roots*, *Carrrots*, *Parsnips*, *Celery*, &c. must be supported either with upright props, or crois sticks, to hinder the wind from breaking down their stems before the Seed be Ripe.

The second is, that we seldom stay to let any Seeds dry upon their Plants as they stand, it being enough to let them only Ripen, when we cut down their stems, and lay them to dry upon some Cloth, after which, we beat them out, and fan and cleanse them and lay them up when they are fully dry: And thus we do with the Seeds of *Cresset*, *Chervil*, *Parley*, *Radishes*, *Borage*, *Englefi*, &c.

Ordinary *Capers* grow upon a sort of small Shrub that is raised in niches made purposely in well expofed Walls, for that end, which are filled with Earth to nourish the Plants; and every year in the *Spring* we prune their Branches, which afterwards shoot out buttons or swelling buds, which are pickled up in *Vinegar* to be used in *Winter*, either in *Salats*, or in pottage.

*Capucine-Capers*, or *Nasturties*, are annual Plants which are usually sown in *Hot Beds*, in the Month of *March*, and transplanted again in the naked Earth along by some Walls, or at the foot of some Trees, where their mounting stalks which are but weak, and grow pretty high may take some hold, to support themselves. They are also planted in Pots, and Boxes, in which some sticks are set up to support their stalks. Their Buttons or round Buds before they open, are good to pickle in *Vinegar*. Their Flower is pretty large of an *Orange Colour*, and very agreeable. They must be carefully watered in the *Summer*, to make them shoot vigorously, and so long times as they should. Their Seed falls to the Earth as soon as ever 'tis ripe, as well as that of *Borage* and *Englefi*, and therefore must be carefully gathered up.

*Capons*, are a sort of large *Straw-berries*, not over delicate, which ripen at the same time as those of the better kind. Their Leaves are extraordinary large, velvety and of a darkish *Green Colour*. They are little to be prized, and are found in the Woods as other *Straw-berries* are.

*Spanish Cardons* or *Cardons*, grow only from Seed. They are sown at two several times.

The first is commonly about the middle, or latter end of *April*, and the second, at the beginning of *May*.

They must be sown in good and well prepared Ground, and in little Trenches or pits a full foot wide, and about six Inches deep, filled with Mold. We make *Beds* of four or five foot wide, in order to place in them two ranks of those little Trenches or pits checker-wis. We put five or six Seeds in every hole, with intention to let but two or three of them grow, if they all come up, taking away those that are over and above that number,

number, either to throw away, or to new stock those places where there perhaps are none come up, or where we may have sown some few upon a *Hot Bed* for that intention. And if in fifteen or twenty days we do not see the Seed come up, we should uncover them, to see whether they be rotten, or begin to sprout, that so we may fill up their places with new ones in case of need. The Seeds of the first sowing are generally three weeks coming up, and those of the second fifteen days. *Cardons* must not be sown before the middle of *April*, for fear they should grow too big, and run to Seed in *August* and *September*, and then they are not good. Great care must be taken to water them well; and when towards the end of *October*, we have a mind to whiten them, we take the advantage of some dry day, first to tie up all their Leaves with two or three bands, and some days after, we cover them quite up with Straw or dry Litter well twined about them, so that the Air may not penetrate to come at them, except it be at the very top, which we leave open.

These *Cardon* Plants thus wrapt up, whiten in about fifteen days or three weeks, and grow fit to Eat. We make an end of tying up, and wrapping, or covering all that we have in our *Gardens*, when we perceive the *Winter* approach, and then we take them up with the Earth about them, to transplant them in our *Green House*, or *Conservatory*: Some of those Plants are good to transplant in the naked Earth in the following *Spring*, to run to Seed in *June*, or *July*, or else some Plants of them tied up in their first places, will serve for that three or four times together.

*Carrots* are a sort of Root, whereof some are *White*, and others *Yellow*, that grow only from Seed, and require the same care and ordering which we have already described under the head of *Red Beet-Roots*.

*Celery*, is a sort of *Sallet* produced by Seed, and is not good but at the end of *Autumn*, and during the *Winter* Season. We sow it at two several times, to be supplied with it so much the longer, because that which has been long sown, easily runs to Seed, and grows hard. We sow it then the first time upon *Hot Beds* in the beginning of *April*, and because its Seed is so extrem small, we cannot help sowing it too thick, so that if we be not careful to thin it, and crop it in time, to make it grow to some strength and bigness before we transplant it, it warps and flags its head too much, and grows weak, and shoots its Leaves stragglingly outward, instead of producing flore of them from the middle of its stock. The surest way is to transplant it in a *Nursery Bed*, placing the Plants two or three Inches one from another, for which we make holes with our fingers only; we transplant that which comes of the first sowing at the beginning of *June*, and sow our second sowing, at the latter end of *May*, or beginning of *June*, but 'tis in open *Beds*, and we take the same care to thin, crop, and transplant this, as we did that of the first sowings, but we must plant more of it the second time, than at the first. There are two ways of transplanting it; the one is in a Pit or Trench one full spit deep, and between three and four foot broad, in order to place in it three or four ranks of these Plants at the distance of one foot from one another: This way of making hollow *Beds* Earth up our *Celery* in, is good only in dry Grounds, wet ones being too apt to rot, it. The second way of transplanting it, is in plain *Beds* that are not made hollow, and at the same distances as in the other, taking care in both sorts of *Beds* to water them extremely in *Summer* time, its chief goodness consisting in being tender, as well as in being very *White*. Watering contributes to the first kind of goodness, and for the second, you are to observe, that to *Whiten Celery*, we begin at first to tie it with two bands when it is big enough, chusing dry weather for that effect, and afterward we Earth our *Celery* Plants quite up, with Earth taken off the high raised path-ways, or else cover it all over with a good quantity of long dry Dung, or dry Leaves, as we do *Cardons*. *Celery* so Earthed up with dry Earth, or Clothed with long dry Dung, or dry Leaves, to the very top of its Leaves, *Whiten* in three weeks or a Month, and because when 'tis *Whited*, it rots as it stands, if it be not presently eaten, by consequence, we are not to Earth it up, or cover it with Dung, but in such proportion as we are able to spend out of hand; there needs no other precaution to be used to it so long as it does not freeze; but as soon as ever it begins to set to freeze, we must then cover up our *Celery* quite over head and ears, for a hard Frost spoils it presently. And that we may the more easily cover it, after we have first tied it up with two or three bands, we take it up with the Earth about it, at the beginning of *Winter*, and plant it in another *Bed*, setting the Plants as close as we can one to another, and then there needs much less stuff to cover them, than when they are left standing in their old places at such great distances asunder. The way to raise Seed from them, is, to transplant some Plants of them in some by-place, after *Winter* is past, which will not fail to run to Seed in the Month of *August*, we know but one sort of it.

*Chards*

*Chards* of *Artichokes*, otherwise called *Coflons*, are the Leaves of fair *Artichoke* Plants tied, and wrapt up with Straw in *Autumn* and *Winter*, which being covered up all over but at their very top, with Straw, grow white, and by that means, lose a little of their bitterness, so that when they are boiled, they are served up like true *Spanish Cardons*, but after all, are not so good, and besides the Plants often rot and perish whilst we are waiting them.

*Chard-Beets* are Plants of white *Beets* transplanted in a well prepared *Bed*, at the distance of a full foot one from the other, which produce great Tops, that in the middle have a large white, and thick downy Cotton-like Main shoot, and that downy Cotton-like shoot is the true *Chard* used in Pottages and Intermesses. After we have sown white *Beets* upon *Hot Beds*, or in the naked Earth, in the Month of *March*, we transplant that which is yellowest in *Beds* purposely prepared, and by taking care to water them well during the Summer, they grow big and strong enough to resist the hard winter cold, provided care be taken to cover them with long dry Dung, just as we do *Artichokes*. They are likewise well placed, when two Ranks of them are transplanted between two Ranks of *Artichokes*. We uncover them in *April*, and dress the Earth about them, and give them careful attendance, and by the means of this diligent Culture, they produce those fine *Chards* we have in the *Regation* Season, and in the Months of *May* and *June*; in fine, they run to Seed, which we gather in the Months of *July* and *August*, to sow in the following *Spring*.

The *Chaffels* is a very good and sweet sort of Grape, of which there are two kinds, white and Red, and this latter is very scarce and rare, but the other very common. It requires the good Expositions of the *South*, *East* and *West*, to be so much the yellower, the more firm and crackling, the better; it is of all Grapes that which keeps longest, if it be not suffered to grow too ripe upon the Vine before it be gathered. Its Culture which consists in pruning it, is the same with that of the *Bourdelais* or *Verjuice* Grape.

Musked *Chervil* is one of our *Sallet-Furnitures*, and at the beginning of the *Spring*, whilst its Leaves are young and tender, it is agreeable, and proper to contribute towards the giving a perfuming Relish, but they are to be used no longer when they are old and tough. It remains several Years in its place without being spoiled by the Frost, so that its Stock grows pretty big and high: it runs to Seed towards the Month of *June*, and by that is multiplied.

Ordinary *Chervil* is an annual Plant, or rather a plant of few Months, which serves for many Uses, and especially in *Sallets*, when it is young and tender, and therefore we ought to see a little of it every Month proportionably to the occasions we have for it, and to the quantity of Ground we have. It runs very easily to Seed, and if we have some of it betimes, we must sow it about the end of *Autumn*, and doubtless we shall have the Seed quite ripe towards the middle of *June* following; we cut down the stalks as soon as it begins to grow yellow, and beat it out as we do that of other Plants.

*Ciboules* are a sort of *Lettuces* to tie up; see their Culture under *Lettuces*. *Cibouls* or *Chibouls*, properly speaking, are but *Onions* that are degenerated, and of which Nature has as 'twere miscarried, that is to say, *Onions* that instead of producing a thick Root in the Earth, and one single stem, produces but a small Root, and several Stems, or upright Shoots, and those which produce most of them, are most esteemed, which are the sort of which we should be most careful to preserve Seed, and which if planted in *March* will yield us Seed fit to gather in *August*. We sow *Cibouls* almost every Month in the Year, except in very hard Weather, when the Earth cannot be cultivated; their Seed is so perfectly like that of *Onions*, that they cannot be distinguished one from the other, but of former never recover so as to produce *Onions*, and particularly those we pluck up out of the *Onion Beds*, which are sown too thick, and must be thinned, that those which are left, may grow the bigger. We thin our *Cibouls* also for the same, and we transplant some which prosper very well, and grow big when they are so transplanted. It is convenient sometimes to water our *Ciboul Beds* in *Summer* that prove extraordinary dry, and unless in such cases, they will not need watering, but however they must be always planted in good Earth.

English *Cives*, otherwise called *Appetites*, are multiplied by producing thick Tufts, which are split out and separated into many little ones, and are transplanted nine or ten Inches asunder, either in *Borders* or *Beds*; they require pretty good Ground, with which if they be accommodated, they will last three or four years without removing, without needing any great culture; it being enough to keep them well weeded, and to water them some times

times during the great heat. It is their Leaves only, that are used for one of the *Sallet* Furnitures.

*Citrulls* or ordinary *Pumpions*, *Pumpions*, or *Pumpkins*, and *Potatoes*, or flat *Pumpions*, as every body knows, are the biggest productions the Earth brings forth in our *Climates*, for whose culture there is little to be done; usually we sow them in *The Beds* towards the middle of *March*, that being the only way to preserve and multiply them, and at the end of *April*, we take them up with the Earth about them, to transplant them in holes made for that purpose, of about two foot diameter, and one foot deep, and two *Tisles* or *Fathoms* asunder one from the other, which are filled with mold; when their *Vines* begin to grow live or six foot long, which happens about the beginning of *June*, we throw upon them in the middle of that length some shovels full of Earth, both to prevent their being broken by the winds driving them to and fro, and to make them take root at the place so covered, by which means the *Fruit* that grows beyond that part, will be the better nourished and consequently grow the bigger: There are two sorts of *Citrulls* or *Pumpions*, the *Green*, and the *Whitish* ones, but neither of them are fit to be gathered till they be Augmented, that is till they be grown *Tellur*, and their skin grown tough enough to resist ones nail. We keep of them in our store-houses, till about the middle of *Sept*, when they have been seasonably gather'd, and well defended from the *Cold*: All sorts of situation in the open Air agree with them well enough, but yet they which are well exposed ripen sooner than the others; we trim nothing off from them, but only content our selves with watering them sometimes when the *Summers* are excessive dry. Their Seed is found in their *Bellies*.

*Coleworts* and *Coleflowers* are included under *Cabbage*.

*Custons* of *Artichokes*: See *Chards*.

*Garden Cresses*, is one of the little *Sallet* Furnitures, and is a Plant that lasts but a little while. We sow of it every Month as we do *Chervil*, that we may have always some of it that is tender; and we sow it very thick. It is propagated only by Seed, which it is very apt to run to, and which we begin to gather at the end of *June*, cutting down the stalks in order to dry them, and beat out the Seeds and winnow them as we do those of other Plants, as soon as we perceive any of them to ripen.

*Cucumber*: See their culture under the head of *Melons*, and *Musk-Melons*. It is to be observed, that a *Cucumber* Plant yields a great quantity of *Fruit*, and for a long time, when 'tis well cultivated, and especially when 'tis well watered.

*Currants* and *Goose berries*, both being comprehended under the French name *Grâssilles*, both the *Red* and *White*, or *Pearled* sort, termed in *English*, *Curranis*, and the prickly sort, called in *English*, *Dutch Goose-berries*, are kinds of little *Fruit* shrubs, which yield a great deal of *Fruit*. They produce round about their old stock, a great number of rooted suckers or slips, which serve to propagate them, besides which their Branches and especially the young ones that are cut off from them, take root easily. They are planted in the Month of *March*, at the distance of at least six good foot one from the other, either in whole *Beds*, or squares, or in the void spaces between the *Dwarf-Trees* which are usually planted about the squares of *Kitchen* or *Fruit-Gardens*. Both of them delight in a Ground that is a little moist, the better to enable them to produce thick shoots, and consequently good *Fruit*.

The *Red* and *Pearled*, or *White* sort, called in *English* *Curranis* produce Bunches, which are Ripe in *July*, but the prickly ones, named in *English*, *Goose berries*, produce none, but bear their *Fruit* upon single stalks all along the young Branches of the preceding years growth, and that at the place of every one of the Eyes or Buds of that Branch. The *Fruit* of this latter is used particularly in *March* and *April*, in *Compotes* or wet sweet-meats, and sauces, for which uses it must be very *Green*, for when it is Ripe, it grows too soft and flat. The culture that is most proper to be used to both *Curranis* and *Goose-berries*, and especially to the *Curranis*, consists in cutting away all their old wood, and preserving only that of one and two years growth: for a confused mixture of one with the other, is not only very indigestible and pernicious, but the old Branches will bear nothing but very small *Fruit*, till at last they quite degenerate, so that they will bear none but small, common, and very crabbed lowre *Curranis* or *Goose-berries*, and as soon as the old stocks have done bearing any longer either fair Branches or good *Fruit*, we should take a Resolution utterly to grub them up, after we have first raised a plantation of new ones in some other choice fresh piece of Ground, to supply their places; for a *Garden* ought by no means to be without fair *Curranis* and *Goose-berries*, and as soon as ever the new ones begin to bear, we are to destroy the old ones, which make but a very unsightly figure in a *Garden*.

D. Sharp

D.

*Sharp Dock*, or *Dock-Sorrel*, or *Patience*, properly speaking, is but a sort of very great or large *Sorrel*, which is very lower. We content our selves only with some borders, or perhaps, some one single *Bed* of it, to have some of its Leaves to mix now and then among our *Sorrel*. The manner of raising it is the same we practise with *Sorrel*.

E.

*Endive* is a sort of very good annual Plant used in *Sallets*, and in our pottage in the *Autumn* and *Winter* Seasons, provided it be well whitened, and consequently tender and delicate; it is multiplied only by Seed. There is the Common or *Garden Endive*, and wild *Endive*, called also *Succory*, the common name in *French* to them both. The Common *Endive* is of several kinds, viz. The *White*, which is the most delicate, and the *Green* sort which is the most rusticall, and best able to resist the *Cold*, as likewise the *Curled* sort, and that which is not *Curled*.

All sorts of them agree tolerably well with all kinds of Ground. We seldom begin to sow any of them till towards the middle of *May*, and then they must be sown very thin, or be very much thinned, afterwards in order to be whitened in the places where they first grow, without transplanting, and we also sow but a little quantity of them at once, because they are too apt to run to Seed: The season for sowing a greater quantity of them is at the latter end of *June*, and during the whole Month of *July*, in order to have some good for spending in *September*, and we afterwards sow a great deal of it again in *August*, that we may have a sufficient provision of it to supply us all the rest of *Autumn*, and the first part of the *Winter*. When our *Endive* comes up too thick, we cut it, or else pull up some of it, to thin it, that the rest may grow big enough to be transplanted; and when we transplant any of it in *Summer* time, it must be placed at the distance of a large foot between Plant and Plant; we usually make great *Beds* of five or six foot broad, in order to transplant them afterwards in rows markt out frait with a cord. This Plant requires great and frequent waterings; and when 'tis big enough we must go to work to whiten it, for which effect, we tie it up with two or three bands according as its height requires; and being so tied, it whitens in fifteen, or twenty days: But because it is very apprehensive of the *Frost*, therefore as soon as ever the *Cold* begins to come on, we cover it with long dry Dung, whether it be tied up or no: At the end of *September*, we plant the stocks of it pretty near together because then it grows neither so high, nor spreads so much as in *Summer*: And if we can save any Plants of it in *Winter*, we must transplant them again in the *Spring* in order to produce Seed that may have sufficient time to ripen. Those persons that have a good *Conservatory* or *Green* house, will do well to house it up there, but they which have none must be content to cover it up well with a good quantity of long dry Dung, so that the *Frost* may not come at it.

Wild *Endive*, or *Succory* is sown at the very beginning of the Month of *March*, and that pretty thick, and in Ground well prepared. We endeavour to fortify it, and make it grow big all *Summer*, by watering, and cropping it that it may be fit to whiten in *Winter*.

There are some People that will eat it *Green* in *Sallets* though it be never so bitter, but commonly they rather desire it whitened: And to whiten it, we cover it up with a great deal of long Dung, after we have first cut it close to the Earth, by which means, it been forced to spring up in obscurity, and shaded from all light, its young shoots grow *White* and tender. The nearest way is by the interposition of some props crossing from side to side, to keep the Dung from touching it, since it shoots up in the same manner under such a hollow covering as under a close one, so that care be taken, so well to stop up passages on all sides, that no light or Air at all get in. Being thus ordered, its shoots are much cleaner, and relish not so much of the Dung. They which have *Conservatories* may transplant some of it thither in *Winter*, it sprouting well enough there, when it is but a little obscurely placed. When it is *Green* it endures the *Frost* well enough, and at the very latter end of *May*, it runs to Seed. Many People eat its young shoots in *Sallets* when they are young and tender.

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F. Fennel

## F.

**F**ennel is one of our *Sallets* Furnitures which grows only from Seeds, and is seldom transplanted. It resists the Cold of *Winter*. We sow it either in *Beds* or *Borders*. It springs again, when cut. Its youngest and tenderest shoots are the best. Its Seed is gathered in *August*; and in fine it agrees well enough with all sorts of Grounds. See more of it under *Anis*.

*Furnitures*, which are *Mint*, *Tarragon*, *Samphire*, &c. See their culture under the several titles of those Plants that compose them.

## G.

**G**arlick is propagated by heads, or kernels called *Cloves*, about the end of *February* which are set three or four Inches deep in the Ground, and at three or four Inches distance one from the other. They are taken out of the Earth at the end of *July*, and laid to dry in a place free from moisture, in order to preserve them from one year to another.

*Goose-berries*: See *Currants*.

## H.

**H**artshorn or *Buckhorn Sallet*, is a little annual Plant whose Leaves when tender, are used in *Sallet* Furnitures they are sown in *March* very thick, it being impossible to sow them thin, because their Seeds are so very small which are gathered in the Month of *August*. The little Birds are very greedy of them, as they are of all other small *Kitchen* Plant Seeds. When the Leaves of this Plant are cut, there spring up fresh ones, as do also from *Sorrel*, *Civets*, *Parsley*, &c.

*Fine*, or *Sweet Herbs*: See *Aromaticks*.

## L.

**L**avender serves to garnish borders in *Kitchen-Gardens*, and yields a Flower which without being separated from its stalks, is used to put among clean Linnen to perfume it. It is multiplied both by Seed, and by its Branches or Slips which have taken Root at their joints.

*Leeks* are sown at the end of *Winter*, and that pretty thick, and in *Beds* well prepared, after which during the whole Month of *June*, we take them up neatly and transplant them into other *Beds* which are no less carefully prepared; in order to which, we make with a planting stick, holes about four Inches deep, and half a foot asunder, and after we have a little trimmed both their Roots and Leaves, we only slide down a single Plant into every hole, without minding to press down the Earth about it, as we do to all other Plants; however we take care to grub up the Weeds about them from time to time, and to water them a little in very dry weather, that their stems may grow to a due thickness, and may whiten before *Winter*; when the Frost is very brisk, it is best to cover them, or else, to set them into Earth in the *Conservatory*; it is likewise very convenient, to take them up out of their *Bed* where they are planted a little at large, and to place them nearer together afterwards in another *Nursery Bed*, and cover them up with long Litter, because otherwise when it freezes hard, we should not be able to get them out of the Ground without breaking them. We may leave some of them standing after *Winter*, to run to Seed, or else we may Plant some in a separate place for that purpose. Their Seed is gathered in *August*, and there is one sort that is bigger than the ordinary one, which is the best.

*Lettuces* are Plants that are the most ordinarily and commonly seen in our *Kitchen-Gardens*, and are indeed the most useful *Manna* of them, and especially for *Sallets*, of which almost all the World is most constantly amorous. We have many things; for in the first place, there are *Lettuces* of different Seasons, those which are good in certain Months in the year being not good in others; and those which grow well in the *Spring*, thriving not well in *Summer*; and they which prosper in *Autumn* and *Winter*, coming to nothing, neither in *Spring* nor *Summer*, as will be seen afterwards. In the second place, there are some that with the ordinary help of the general culture attain their due perfection, and contribute both to the nourishment and pleasure of Man-kind, and they are the *Cabbage Lettuce*.

Thirdly

Thirdly, there are some that necessarily require the Art of Industry and the Gard'ner to advance them to that degree of perfection which they should have; and they are such as must be tied up to make them grow white, without which they would be neither tender, nor sweet, nor good; such as are the *Roman Lettuces*, &c. Nay, and I have thought fit sometimes to tie up those that were to cabbage, when I saw they did not cabbage soon enough, by which means they may be forced to cabbage whether they will or no. I use this Method particularly with some sorts of *Winter Lettuces*, that is, when there are any of them which though furnished with leaves big enough to cabbage, yet for want of sufficient heat, are hindered from turning, that is from growing hard; and this expedient is a very sovereign Remedy against that Defect, in a early Season; and besides these general distinctions, the number of the particular Kinds of *Lettuces* is greater than of any other sort of *Kitchen-plants* whatsoever, as will appear more especially by the order they observe in respect of the Seasons; and the order of the *Cabbage Lettuces*, as near as I can describe it, is this.

The first that cabbage at the going out of *Winter*, are the *Shell Lettuces* so called, because their Leaf is round almost like a Shell. They are otherwise called *Winter-Lettuces*, because they pretty well endure ordinary Frosts, which none of all the other *Lettuces* can do. These are sown in *September*, and afterward transplanted in some *Walk-Border* towards the South and East, in the Months of *October* and *November*, or else they are sown upon *Hot Beds* under *Bells*, in the Months of *February* and *March*, and are good to eat in *April* and *May*. We have at the same time another sort of *Reddish Lettuces* called *Passion Lettuces*, which prosper very well in light Grounds, but not over well in others that being colder and stronger or heavier, easily infect them with slimy Snivel. Both these kinds should when they thrive, produce very thick and good Heads. To these succeed the Bright curled *Lettuces*, which usually cabbage in the *Spring*, that is before the heat grows anything excessive, but they must not be planted in strong and heavy Lands. They likewise do well enough upon a *Hot Bed*, and especially under *Glass Bells* or *Frames*; for when they are sown in *January*, and transplanted as soon as they are grown anything thick, or else left thin upon their *Nursery-Beds*, they cabbage as soon as the *Winter-Lettuces*, and are very excellent.

There is about the same Season, two other sorts of *Curled Bright Lettuces*; viz. one called *George Lettuce*, which are thicker and less curled than the ordinary *Curled Bright Lettuces*; and another called the *Minion Lettuce*, which is the least sort. Both these last require such Ground as we term good black Sand, but yet their Heads seldom cabbage close enough, that is to say, are not ordinarily so hard and firm as those of the right *Curled Bright Lettuces*.

The *Curled Green Lettuces* come in near about the same Season with the preceding ones, but are not so tender nor delicate.

There is also a sort of small red ones, and another named *Short Lettuces*, both which have all the necessary qualifications of good *Lettuces*, excepting only that their Heads are small, and that they likewise require Black Sandy Ground.

The first *Lettuces* supply us amply as I have said, during the Months of *April* and *May*, and the beginning of *June*, but after that time they are too apt to be influenced to run to Seed by the great heat that then comes on. They are followed during the rest of *June*, and all the Month of *July*, by those called the *Royal Bellegardes*, or *Fair Look'd*, *Bright Gemma's*, *Capucins*, *Aubervilliers*, and *Perpignans*; of which last, there are both green and bright, both of which produce very fair and very good heads, and thrive well enough in strong Grounds too, when the Summer proves not too Rainy; but cold, or too frequent Rains infect them with Slime and Snivel, and consequently destroy them. The *Capucin Lettuces* are reddish, cabbage easily, even without transplanting, and are pretty delicate. The *Aubervilliers* bring forth Heads that are too hard, and sometimes bitter withall, and are more used for boiling than for *Sallets*. The difference that appears between the *Royal* and the *Bellegardes* or *Fair look'd Lettuces*, is only, that the former are a little more Greenish, and these last a little Brighter.

However in the Summer time, the tied *Lettuces* are mixed among the cabbaged ones, viz. the *Roman Lettuces* which are open, and are called *Chicons*, or *Bright*, and are termed *Alphanges*, which last are more delicate than the *Chicons*, both to raise, and when they are eaten in *Sallets*. There are also a sort which are stiled *Imperial Lettuces*, which are of an extraordinary great Size, and are likewise very delicate to the taste, but very apt to rot as soon as ever they grow white; there are besides, a certain kind of large *Reddish Chicons*, which whiten in a manner of themselves without tying, and are good in course Grounds, and succeed usually pretty well in Summer, as for the green *Chicons*, we

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cannot

cannot well have them but in the Spring, because they run too hastily to Seed. The *Lettuces* that defend themselves best from the great heat that predominates about the end of *July*, and all the Month of *August*, are those we call *Gemma Lettuces*, and especially the green sort, for the *Bright Gemma*, and *Red Gemma* run more easily to Seed, and will hardly come to good but in light Grounds. We should therefore prepare a great many of these green *Gemma's* against the Dog-days, and the first Frosts; we may also intermix with them some few *Bright*, and some *Red Gemma's*; but more especially we should be sure to mix with them some *Alfanges*, and a great quantity of bright or white *Endives*, as likewise, a great many *Perpignan Lettuces*, both of the bright and green kind. The great Inconveniencies that happen to *Cabbage Lettuces*, are first, that they often degenerate so far as to cabbage no more, which is discovered by their Leaves growing out in length like a Cat's Tongue, as Gard'ners term it, or by their changing their natural colour into another more or less green; and therefore we must be very careful to gather no Seed from any but such as cabbage very well; for which effect, we should be sure to mark out at first, some of those that turn best, in order to reserve them to run to Seed where they stand, or to remove them with a turf of the Earth about them into some separate place assigned for that purpose.

The second is, that as soon as the most part of them are cabbaged, they must be spent, unless we would have the displeasure to see them run to Seed without doing us any Service; in which Respect the Market Gard'ners have a great advantage beyond other Persons, because they can sell off in one day, whole Beds of these *Cabbage Lettuces*, for commonly the Beds which were new planted at the same time, *Cabbage* likewise all at once, whereas in other Gardens, we cannot spend them any faster than we need them, for which Reason we are obliged to plant often of them, and that in greater quantity than we are able to consume, that we may have a continual supply of them successively, without any Discontinuation, it being much more commodious to have an over-plus quantity of them, than to want. The surest way is to keep particularly to those sorts that are the most Rustical, and that last a great while cabbaged before they run to Seed, such as are the *Shell Lettuces*, the *Perpignans*, the *Green Gemma's*, the *Aubervilliers*, and the *Austrichettes*, or *Austrian Lettuces*, which I must confess too, are a long time cabbaging.

The third inconvenience is, that the *Morie*, that is, the Rot which begins at the ends of their Leaves, seizes them sometimes, and that when the Ground or the Season are not favourable to them, they remain thin and lean, and run up to Seed instead of spreading and cabbaging. There is hardly any Remedy to prevent this Rot because there is hardly any to be found effectual against the cold and rainy Seasons that cause it; but against the defects that may be in the Ground, there are infallible ones, that is to say, it must be amended and improved with small Dung, if it be barren, whether it be a sandy, or a Cold and gross Earth; and to this last, we should give a little slope, if when the Ground is good, the waters spoil it by settling too much in it, and by that means, make all the Plants growing there to rot. Good Dung thoroughly rotten, being the Soul and *Primum Mobile* of *Kitchen-Gardens*, without which, no more than without frequent waterings, and dressing of the Ground no man can ever be rich in fine and goodly *Legumes*.

There yet remains to be known for the perfect understanding the ordering of *Lettuces*, that they which grow biggest must be placed ten or twelve inches one from the other, which is to be understood of the *Shell Lettuces*, *Perpignans*, *Austrians*, *Bellegardes*, or *Fair-looks*, *Aubervilliers*, *Alfanges*, and *Imperials*; and for those that bear heads but of a midling size, the distance of seven or eight inches is enough, which are the *Bright Curled*, the short, the little *Red*, and the *Green Chicon Lettuces*, &c. Those that will be good husbands may sow *Radishes* in their *Lettuce Beds*, because the *Radishes* will be all drawn out and spent before the *Lettuces* cabbage; and for the same reason, because the *Endives* are much longer before they come to perfection than the *Lettuces*, we may Plant some of these last among the *Endives*; they agree well enough one with the other: and so we may have a double crop to gather upon one and the same Bed and in the same Season; for the *Lettuces* are gathered first, and afterwards the *Endives* arrive to their full goodness.

M

M.

*Maiches*, are a sort of little *Sallet* which we may call a wild and rustical *Sallet*, because indeed it seldom is brought before any noble Company. They are multiplied by Seed which is gathered in *July*, and are only used towards the end of *Winter*. We make *Beds* for them which we sow about the end of *August*; they are hardy enough to resist the rigours of the *Frost*, and because they produce a great many little Seeds that easily fall, though we have but a little quantity of them, they will propagate themselves sufficiently, without any other culture but weeding them.

*Mallows* and *Mayb-mallows* ought to be allowed a place in our *Kitchen-Gardens*, though civility will not permit us to explain in this Treatise what uses they serve for, and though they be rather Plants of the wild fields than of a *Garden*. They grow of their own accord, and have no more need of cultivating than any of the Weeds that infest the good Herbs. When we have a mind to have any of them in our *Gardens*, it will be best to sow them in some bye-place.

*Marjoram*, or *Marjeram*, is an Odoriferous Plant of which we compose agreeable Borders and Edgings. There is the *Winter Marjoram*, which is the best, and the *Summer Marjoram* which lasts not beyond that Season. Both of them are multiplied by Seed, and likewise by Rooted slips or suckers. They are principally used in making Perfumes.

*Mint*, called in *French*, *Balm*, when once planted, needs no other particular culture than being cut down close to the Ground every year, at the end of *Autumn*, to make it shoot out store of tender Sprouts in the *Spring*, which are mingled with the Furnitures of *Sallets* for them that love them a little spicy and perfumed. It must be renewed every three years at least, and placed always in good Earth. The Branches when cut off, take Root at the place where they are covered, and by that means, of one great Tuft, we may easily make a great many, which are to be planted at the distance of a foot one from the other. In the *Winter* likewise, we plant some thick Tufts of it upon *Hot Beds* and by taking care to cover them with *Bells*, they spring very well for about fifteen days, and then perish.

*Muscats* are a kind of *Grapes*, which when they attain to their natural goodness, are one of the most considerable commodities of a *Kitchen-Garden*. There are three sorts of them, viz. White, Red, and Black, the White is commonly the best of the three, it requires temperate Countries like that of the *Ile of France*, and the Exploitations of the *South and East*, and always a light Ground, we seldom see any good ones in pure Earth, and if it be in hot Climates, or Gravelly and Sandy Ground; they prosper very well upon Counter-Espaliers, or Pole Hedge-Trees, and even in the open Air. Their Goodness consists in having large, yellow, and crackling Berries, and growing thin in their Clusters, and in a pretty rich musked taste, but yet not too strong like the *Spanish* ones. The Province of *Tourain* produces admirable ones. Their Culture is exactly the same with that of the *Chassela's* Grapes, both as to their Pruning, and manner of Propagation.

The *Long Muscat*, called otherwise the *Passé-Musquee*, is another sort of Grape whose Berry is bigger and more longish than that of the ordinary *Muscat*, and its clusters are also longer, but yet its taste is nothing near so rich as that of the others.

N.

*Nasturces*: See *Capucin Capers*.

O.

*Onions* are red or white, which last are sweeter and more prized than the red ones. There's no Body but knows how many uses they serve for. They are propagated only by Seed, which is commonly sown at the latter end of *February* and beginning of *March*, in Beds of good Earth, and well prepared, and afterwards raked with an Iron Rake, to cover them, as is done to other small Seeds. They must be sown thin, that they may have room to grow to their full bigness, and therefore if they come up too thick, they must be thinned by pulling some of them up as soon as they are big enough for that, which is towards the Month of *May*, which we transplant in order to use instead of *Ci-bois*. Though the ordinary Season for sowing *Onions*, be at the end of *Winter*, yet we may

may

may sow some in September, and transplant them afterwards in the Month of May, by which means we may have some full grown at the very beginning of July, which we may gather, plucking them first out of the Ground as soon as that time comes, and then after we have dried them two or three days in the hot Sun, lay them up in some dry place, to keep all the year in case of need. We must not forget when our Onions begin to appear with pretty thick Stems above the Superficies of the Earth, that is, when they begin to advance towards their Maturity, to break them down, either by treading them under our Feet, or with a board pretty hard pressed down upon them, because by that means the nourishment that was before spent in their stems, being hindered from mounting upwards, will remain and settle all in that which I think, is but improperly called their head, and make it grow so much the bigger. I have already told you elsewhere, how their Seed is to be raised.

## P.

**Parsley**, as well of the Curled as ordinary sort, is of great use in Kitchens all the year long, as well for its Leaves as Roots. It is comprehended under the Title of *Verdures* or green *Pot-herbs*. We ought not to fail in the Spring, to sow a reasonable quantity of it in every Garden, and that pretty thick, and in good, and well prepared Ground. When its Leaves are cut, it shoots out new ones like Sorrel. It well enough resists a moderate, but not a violent cold, and therefore 'tis best to bestow some covering on it in Winter, to defend it. When we would have any of it produce large Roots, we must thin it in the Beds or Borders where 'tis sown. It requires pretty much watering in very hot weather. There are some that pretend to have a kind of *Parsley* bigger than ordinary, but for my part I know no such kind. The Curled *Parsley* appears more agreeable to the Sight, than the Common sort, but is never a whit better than it for that. We gather our *Parsley* Seeds in the Months of August and September.

*Macedonian Parsley*, or *Alisanders*, is one of the Furnitures of our *Winter-Sallets*, which must be whitened like *Wild Endive*, or *Succory*; that is to say, at the end of Autumn, we must cut down all its Leaves, and then cover the Bed where it grows, all over with long dry Dung, or Straw Screens, so close, that the Frost may not come at it, by which means, the new Leaves that spring from it, grow white, yellowish and tender. We sow it in the Spring, pretty thin, because it produces a great many large Leaves, and we gather its Seed at the latter end of Summer. It is a good hardy Plant, and that defends its self very well from the Drought, without requiring much watering.

*Parsnips* are a sort of Roots well known in our *Kitchens*. We sow them towards the end of Winter, either in open Ground, or Borders, and that always pretty thin, and in good and well prepared Ground; and if they come up too thick, they must be thinned as soon as May comes in, that they which are left, may be the better nourished, and grow the fairer. They are propagated only by Seed, for the raising which, the same care is to be taken as we have directed for that of *Red Beet-roots*, *Carrots*, &c.

*Passe Musquee*: See *Muscats*.

*Patience*, or *Sharp Dock*: See *Dock*.

*Peas*, or *Pease* may be placed in rank of *Kitchen-plants*. It is a good rustical or hardy Plant, which commonly is sown in the open Field, without needing any other Culture than being weeded whilst 'tis young, that is, before it begins to codd. But when they are propt, they yield more than when they are not. They require pretty good Ground, and a little Rain to make them tender and delicate, and must be sown pretty thin. There are several sorts of them, viz. *Hastings*, *Green*, *White* and *Square ones*, otherwise called large codded *Peas*, &c. We may have of them in the Months of May, June, July, August, September and October. For to have some all that while after the first, we have no more to do, but to sow them in different Months, to have them fit for eating three Months after. Those sorts we are most choice of in *Kitchen-Gardens* are the *Hastings*, both White and Green, which are of a middling Size. We sow them at the end of October, under the shelter of some *Eastern* or *Southern* Walls, and we raise Ridges or sloped Banks too, sometimes for that purpose; and to dispose them to come up so much the sooner when they are sown, we make them sprout five or six days before, by laying them to steep two days in Water, and afterwards laying them in a place where the cold cannot reach them, till their first Root begins to appear. Hard weather spoils them quite, which is the reason why all we can do, will not procure us any good ones till the latter end of May. We likewise sow some upon hot Beds, at the end of February, in order to transplant them by the sides of some well exposed Walls, in case

case those sown at the latter end of October preceeding, happen to have been spoiled by the Frost. Our last time of Sowing them is at *Midsummer*, to have them fit to eat about *all-hallow-tide*.

*Pompions* and *Potirons*, or *Flat Pompions*: See *Citrulls*.

*Purslain* is one of the prettiest Plants in a *Kitchen-garden*, which is principally used in *Sallets*, and sometimes in *Pottages*. There are two sorts of it, viz. The *Green*, and the *Red*, or *Golden*; this latter is the more agreeable of the two to the Eye, and more delicate and difficult to rear, so that in hard weather we have much ado to make it grow even upon hot Beds, and under Bells, for it seldom prospers in open Beds till about the middle of May, and then too, the Earth must be very good, sweet, and very loose, and the weather very fair. And therefore for our first *Purslain* which we are not to begin to sow upon hot Beds till towards the Middle of March, we must use only the Green sort, because the Yellow or Golden sort dwindles away as soon as 'tis come up, unless the Season be a little advanced, and the Sun a little hot, which is, towards the end of April. It is commonly sown very thick, because its Seed is so very small, that it cannot be sown thin. When we sow it upon hot Beds, either when 'tis cold, and that by consequence Glass-bells or Frames are needfull, or in milder Weather, we only press down the Mold about it with our hands, or with the back of a Spade; but when we sow it in open Beds which must be well prepared for that purpose, we rake it over five or six times with an Iron Rake, to make the Seed enter into the Ground.

They way to raise Seed from it, is to transplant some Plants of it that are big enough, into Beds well prepared, at the distance of eight or ten inches ones from the other: The Months of June and July are proper for that effect. And then in a little time after, they are run up, and have done flowering, altho as ever we perceive any of their Husks to open, and discover some black Seed, we must cut down all their Stems and lay them some days in the Sun till all the Seed be quite ripened, and then we beat them out and winnow them, &c. We must be careful to transplant each fort apart by it self, that we may not be mistaken in the Seed when we are to sow it. The Stick Stalks of *Purslain* that is run to Seed, are good to pickle in Salt and Vinegar, for *Winter Sallets*.

## R

**Radishes**, when they are qualified with all the goodness they should have, that is, when they are tender, and snap easily, and are sweet, are in my Opinion, one of the Plants that give the most pleasure of any in our *Kitchen-gardens*, and that give it as often, and for as long a time as any of them all; and I look upon them as a kind of *Manna* in our Gardens. There seems to be no great pains required to make them grow, it being indeed only necessary to sow them pretty thin, in well prepared loose and mellow Earth, and to water them soundly in drier Weather, and with this culture they will attain to all the perfection they are capable of. But the main points here in Question, are first, to be always provided with Seed of a good kind; and secondly, to take order to have *Radishes* without discontinuation, from the Month of February, till the coming in of the Frosts in the middle of November. As for Seed of a good kind, know, that is it that produces few Leaves, and a long red Root, for there are some that produce a great many leaves and little Root; and when we are once provided with Seed of a good kind, we must be extreme careful to propagate it, that we never be without a stock of it; for which effect, in the Month of April, we must choos out among those *Radishes* that are come of the last years Seed, such, as I have said, which have the fewest Leaves and the most Root, and reddest Necks, and transplant them quite whole in some well prepared spot of Ground, a foot and a half a sinder: Being so transplanted, they will run up, flower and yield Seed ripe enough to gather towards the end of July; and then we cut down their stems; and after they have been dried some days in the Sun, we beat out the Seed, and winnow it, &c.

Those stocks of them that run up to Seed, shoot up their Branches to such a height, and perpetuate their flowers so far as if they knew not where to stop; and therefore it is good to pinch off these Branches to a reasonable length, that the first Poddas may be the better nourished.

But 'tis not enough to raise good Seed, we must likewise take order to be supplied with good *Radishes* for eight or nine Months in the year. The first that are eaten grow on Hot-beds, the manner of raising which, I have explained in the Works of November; and by the means of those *Hot Beds*, we may have some during the Months of Febru-

ry March and April; otherwise we have none; and in order to have some all the other Months, we must sow some among all manner of Seeds, they coming up so very quickly, that we have time to gather off our *Radishes* before they can do any harm to the other Plants. *Radishes* are extremely apprehensive of the excessive heat in Summer, which makes them grow strong as they term it, that is, too biting, stringy, and sometimes very hard; and therefore in that Season we would affect to sow them in very loose Mellow Ground, where the Sun shines but little; and the best way should be, to make up along by the sides of some Northern Walls, a Bed or two for that purpose, filled with mold to the depth of a large foot and an half, and to sow our *Radishes* there, and water them well. In Spring and Autumn, when the Sun is not so hot, *Radishes* take well enough in open Ground, and in the wide unsheltered Air.

*Rasp-berries*, or *Rasp-berries*, as well as the *White* as *Red*, begin to Ripen at the beginning of July. They are planted in March, either in Beds or borders observing the distance of two foot between Plant and Plant. They shoot out during the Summer many well Rooted Suckers, some of which we take away to make new plantations with, by which means the old ones are likewise renewed for they die aloon as their Fruit is gathered. The only culture used to them is, first, in the Month of March to shorten all their new shoots which we preferre round about the old stock, and which ought to be only the thickest and handomest, and in the second place, to pluck away all the small ones, as likewise the old ones that are dead.

*Rapences* are a sort of small sweet *Radishes* which grow wild in the Country, and especially in the Corn, and are catch in Sallets in the spring time. They are multiplied only by Seed.

*Recamboles*: See *Shallots*.

*Recket* is one of our Sallet Furnitures, which is sown in the Spring as most of the others are. Its Leaf is pretty like that of *Radishes*, and its Seed is very small, and almost like *Pustlain* Seed, but it is of a Reddish, or rather darkish Cinnamon Colour.

*Rosemary* is another sort of Odoriferous Plant which is principally used for the perfuming of Chambers, and in decoctions for washing the Feet. It is multiplied in the same manner as *Rue*, and other border Plants, and lasts five or six years in its place.

*Rue* is a Plant of very strong smell, of which we plant some borders in our Gardens; it is propagated both by Seed, and Rooted slips, and is hardly of any use but against the vapours of the Mother.

## S.

*Sage* is a border Plant, whose culture has nothing of particular, but is like that of the other border Herbs, as *Rosemary*, *Lavender*, *Worm-wood*, &c. There is a sort that is particular, which to some people appears more agreeable than the common *Sage*, which is of palish Green Colour.

*Spanish Salsifie*, or *Salsifie*, otherwise *Scorzonera*, is one of our chiefest Roots, which is multiplied by Seed as well as the others, and is admirable good boiled both for the pleasure of the taste, and the health of the Body. It is propagated only by Seed which is sown in March. We must be careful to sow it pretty thin, whether it be in Beds or borders, or else at least to thin it afterward, that its Roots may grow the bigger. *Scorzonera* runs up to Seed in the Months of June and July, and is gathered aloon as tis Ripe.

Common *Salsifie* is another sort of Root cultivated after the same manner as the preceeding one, but is not altogether so very excellent. They easily pass the Winter in the Ground. It is good to water both sorts of them in very dry weather, and to keep them well weeded, and especially, to put them into good Earth well prepared, of at least two full foot deep.

*Sanspire* called in French, *Pierre Pierre*, or *Passe-Pierre*, is one of our Sallet Furnitures that is multiplied only by Seed, and which being by nature very delicate requires to be planted by the sides of Walls exposed to the South or East, the open Air, and great Cold being pernicious to it. We usually sow it in some Pot or Tub filled with mold, or else on some side-Bank towards the South or East, and that in the Months of March or April, and afterwards transplant it in those places above-mentioned.

*Savory* is an annual Plant a little Odoriferous, which grows only from Seed, and whose Leaves are used to some Ragouts, and particularly among Pests, Beans; it is sown in the Spring either in Beds or borders.

*Scorzonera*,

*Scorzonera*, or *Scorzonera*: See *Spanish Salsifie*.

*Shallots*, otherwise *Rocamboles*, or *Spanish Garlick*, require no other culture than common *Garlick*, and are particularly remarkable for that their Seeds are as good to eat as their Cloves taken out of the Earth. Their Seed is large and serves to propagate them as well as the Cloves or Kernels that compose their Root.

*Skirrets* are a sort of Roots propagated by Seed, and cultivated like other Roots, as is directed in the Month of March.

*Spingee* is one of those Kitchen Plants that requires the best Ground, or at least that which is most amended and improved. They are multiplied only by Seed. We sow them either in open Ground, or else in furrows or strait rows upon well prepared Beds and this we do several times in the year, beginning about the sixteenth of August, and finishing a Month after; the first are fit to cut towards the middle of October, the second in Lent, and the last in Rogation time; Those which remain after Winter, run up to Seed towards the end of May, which we gather about the middle of June. When they are once cut they spring up no more, as *Sorrel* do's. All their culture consists in keeping them very clear from Weeds; and if the Autumn prove extraordinary dry, it is not amiss to water them sometimes. They are never transplanted no more than *Chervil*, *Cressets*, &c.

*Sorrel* in Kitchen-Garden terms, is placed under the title of *Verdures*, or *Green Pot Herbs*, and accordingly is much used in the Pot. There are some sorts of it that produce a larger Leaf than others, which are called *Sorrel* of the greater sort. All the sorts may be sown in the Months of March, April, May, June, July and August, and in the beginning of September too, provided they be allowed sufficient time to grow big enough to resist the rigour of the Winter, we sow *Sorrel* either in open Ground, or else in strait rows, or furrows, in Beds or borders, in all which cases, it must be sown very thick, because many of its Plants perish. It requires a ground that is naturally good, or else well improved with Muck. Its culture consists in being kept very clear of Weeds, in being well watered, and being covered with a little mold once or twice a year, after 'tis first cut down very close to the Ground. That mold serves to give it new vigour, and the Season most proper for applying it, is in the hot Months of the year. *Sorrel* is most commonly multiplied by Seed, though sometimes we transplant some of it that thrives very well. We gather its Seed in the Months of July and August. There is a particular sort of *Sorrel*, which is called Round *Sorrel*, its Leaves being indeed Round, whereas those of the other sorts are very sharp and pointed. The tender Leaves of this sort are sometimes mixed with Sallet Furnitures. But it is ordinarily used most in Bouillons, or thin Broths. It is multiplied by running Branches, that take Root in the Earth, as they run over it, which being taken off, and transplanted, produce thick Tufts which also produce other runners, and so in infinitum.

Sharp Dock, or Dock-Sorrel: See Dock.

Wood Sorrel, or *Alleluia*: See *Alleluia*.

*Straw-berries*, as well the *White* as the *Red*, multiply and perpetuate themselves by running Suckers that springing out of their old stocks, take Root. It is observed, that a new plantation of them taken out of the Woods, turns to better account when transplanted, than one slipped off from the Garden *Straw-berries*. We plant them either in Beds or borders, both which must be well prepared, amended and laboured or stirred up in one manner or other. If it be in dry and sandy Ground, both the Beds and borders must be sunk a little lower than the Allies or path-ways, the better to retain both the rain that falls, and the water we bestow on them; a quite contrary course must be taken, if we plant them in strong, heavy, and fat Earth, and that is almost all pure Clay, because excessive moisture rots the Plants. We place them usually nine or ten Inches asunder, putting two or three little Plants into each hole which we make with a planting stick. The best time to plant them in is during the whole Month of May, and in the beginning of June, that is to say, before the great heat comes in. And we may plant them all Summer long in rainy Seasons. It is particularly requisite to plant Nurseries of them in the Month of May, and that in some place near the North Quarter, the better to shelter them from the violent heat of the Summer Sun, and then we plant them but three or four Inches one from the other, and when they are grown big enough there, we transplant them afterwards in the Month of September in order to make Beds or squares of them, according as we find occasion to have a greater or less abundance of them. Their culture consists chiefly, first, in watering them well in dry Seasons; secondly in leaving, but a moderate number of stems or upright shoots to every stock, three or four of the most vigorous being enough; in the third place, in leaving but three or four *Straw-berries* of

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them

them that appeared first, and nearest the stock, on every stem, and therefore we must pinch off all their other Blossoms that almost endlessly grow out at the ends of those that have already blossomed, or are still in Blossom, because none but the first produce any fair *Straw-berries*, hardly any of the last being ever known to knit or come to any perfection, but when we are careful to pinch them off judiciously we may be assured always to have good *Straw-berries*. I have already given directions in the works of the Month of February, how to raise *Hasting Straw-berries*. Curious Persons have usually two *Straw-berries* of two several Colours, viz. *Red and White*, but they place them in separate Beds. The great Enemies of *Straw-berry* Plantations are the *Tom's* which are great *White Worms*, that in the Months of *May and June*, gnaw the necks of their Roots between two Earths, and so kill them; to prevent which, in those Months we should carefully search every day, under the Roots of all our *Straw-berries* that begin to wither, where we shall commonly find one of these great Worms which after they have done a mischief to one, pass on to do the same to other *Straw-berry* Plants, and kill them in the same manner. *Straw-berry* Plants bear very well the year after their planting, if planted in *May*; but yield very indifferently, if not planted till *September*, after they are taken out of the Woods; yet in the second year they bear wonderfully, but that being past, they produce but very pitifully, and therefore 'tis good to renew them every two years; it is likewise convenient to cut off every year their old tops, when the *Straw-berries* are gone, which is commonly at the latter end of *July*. The earliest *Straw-berries* that ripen towards the end of *May*, are those that were planted by the sides of *Southern or Eastern Walls*, and they that ripen last, are such as are planted in a *Northern Exposition*.

*Succory*: See *Endive*.

*Sweet Herbs*: See *Aromaticks*.

## T.

*Tarragon* is one of the perfuming or Spicy Furnitures of our *Sallets*, it is propagated both by rooted slips and Seed. It springs again several times after 'tis cut; it endures the Winter, and needs little watering in the driest weather in Summer, when we plant it, we must allow eight or nine inches distance between Plant and Plant in the Beds we set with it. The best time to plant in, is in *March and April*, which hinders not, but that we may transplant it again in the Summer Season.

*Time* is another odoriferous Border-plant, which is multiplied as well by Seed as rooted Branches or Slips. A Border of *Time* is a considerable and necessary Ornament in our *Kitchen-Gardens*.

*Tripe-Madam* is one of our *Sallet-Furnitures*; it is used chiefly in the Spring when it is tender, but a little of it ought to serve in the Summer, because then it is too tough. It is multiplied both by Seeds and Cuttings.

*Turneps* or *Turnips* are not properly *Kitchen-Garden* Plants, but yet where they are spacious, they may be admitted into them. They are propagated only by Seed, and are sown very thick in Beds, some in *March*, and others in *August*. We gather their Seed in *July and August*, every Body so well knows their use, that I need speak no more of them here.

## V.

*Vernice Grapes*: See *Bourdelaix*.

*Viner*: See the several heads of *Bourdelaix*, *Muscats*, &c.

*Violets*, and especially the double ones serve to make pretty Borders in our *Kitchen-Gardens*. Their flowers make a very agreeable Figure when they are artfully placed on the Superficies of Spring-Sallets. Every Body knows, that they are propagated by Tufts, that is, by dividing one great Tuft into several little ones, which likewise in time grows thick, and fit to be divided into other little ones.

## W.

*Wormwood*. The plants of this and all other Plants placed in Borders or Edgings, and therefore called Border-plants, as of *Time*, *Lavender*, *Hyssop*, &c. are planted by a Line, and at the distance of two or three Inches one from the other, and five or six inches deep in the Ground. It is good to clip them every Spring, and to renew them every two years, and to take away their oldest and decayed stocks. Their Seed is gathered about the Month of *August*.

## CHAP.

## CHAP. VII.

*Shewing how long every Kitchen Plant may profitably stand in its place in a Kitchen-Garden; which of them must be housed in the Conservatory to supply us in the Winter, and which are they which we may force to grow by Art, in spite of the Frost. And lastly, how long each sort of Seed will last without losing its Virtue.*

IT is a very important point in Gard'ning, to know how long every plant may usefully possess the place where it grows in our Gardens, that so the forecast of an able Gard'ner, may prepare others immediately to substitute in the places of such as being as 'twere, but Passengers, take up their places but a few Months; for by this means, not only there remains no unprofitable spot of Ground in our Gardens, but we seem besides to reap a sensible pleasure by enjoying in some Sense beforehand some things that are not yet in Nature.

To treat of this matter well, I think it very pertinent to speak first of those Plants that are of long duration, whether in respect of the time they take up in attaining to their Perfection, or of that in which they continue bearing. All sorts of *Grapes*, *Capers*, and *Asparagus*, doubtless, hold the first Rank in this number, for *Vine and Caper plants* last five and twenty or thirty years, and as to *Asparagus*, reckoning from the time we first sow or transplant them, we ought hardly ever to begin to gather them till their shoots be of a competent thickness, which happens not till the third or fourth year after, but after that time, provided they be placed in good Ground, and carefully cultivated, they may very well be suffered to stand ten or twelve years, it being certain that they will not fail to shoot up and bear vigorously and plentifully during all that time; but yet if we perceive any decay in them sooner, we may destroy and break them up sooner, and if on the contrary, we find them continue to produce well longer than we have limited, we may continue them longer in their places.

*Raspberry*, *Curran*, and *Gooseberry shrubs*, easily last eight or ten years.

*Artichokes* must be renewed, that is new planted in a fresh place after the third year.

The Borders of *Wormwood*, *Hyssop*, *Lavender*, *Marjoram*, *Rue*, *Rosemary*, *Sage*, *Thyme*, *Violets*, &c. provided they be not endamaged by an extraordinary hard Winter, may subsist in their places three or four years, if care be taken to clip them pretty close every Summer.

*Alliaria*, or *Wood-sorrel*, *Mint*, *Musked Chervil*, *English Cives*, *Tarragon*, *Sorrel*, *Patience*, or *Sharp Dock*, *Samphire*, *Macedonian Parsly* or *Alfanders*, *Tripe-Madame*, &c. may likewise last well enough in their places three or four Years.

*Strawberry* Plants may last three years, *Wild Endive* or *Succory*, *Anis*, *Ordinary Parsly*, *Burnet*, *Fennel*, *Scorzonere*, and *Common Saffire*, &c. last two years.

*Leeks* both to cut, and for *Chards*, and *Cibouls*, &c. last a year, that is, from one Spring to another.

*Borage*, *Bugloss*, *Red Beet Roots*, *Spanish Cardons*, *Carrots*, *Skirrets*, *Cabbages*, *Milan Cabbages*, *Coleflowers*, *Citrus* or *Pumpions*, *Hart's-horn Sallet*, *Potirons* or *Flat Pumpions*, *Parsnips*, *Leeks*, &c. keep their places nine Months, that is, reckoning from the Spring, when they were sown, to the end of Autumn.

*Garlick*, *Basil*, *Nasturces* or *Capucin Capers*, *Cucumbers*, and *Melons* or *Muskmelons*, *Shalots*, *Onions*, and the first or *Summer Turneps*, &c. take them up only during the Spring and Summer Seasons, so that their places may receive a new Decoration of Plants in Autumn.

*Arrach*, or *Orange*, *Ordinary Chervil*, *White Endive*, and *Succory Garden Cresses*, and all sorts of *Lettuces*, whether to cabbage, or to tie up, &c. take up their Ground about two Months.

*Radishes*, *Purslain*, and *Ordinary Chervil*, &c. take up their places but five or six Weeks, and therefore they must be new sown every fifteen days in Summer time.

*Halting Pease* and *Beans*, continue on the Ground six or seven Months, reckoning from the Month of November when they are sown, but common *Peas* and *Beans*, and *Aricids*, or *French-Beans*, take it up but four or five Months.

*Spingee* and *Mitches* keep theirs all *Autumn* and *Winter*, and therefore are planted in places, where we have already raised such Plants as last not beyond the Summer.

*Mallows* and *Marj-mallows* are multiplied only by Seed, and pass not beyond the Winter.

The Plants that require housing in the Conservatory during *Winter*, are *Cardoons*, *Celery*, *Artichoke heads*, both the *Endives*, as well the *White*, as the *Wild* sort, all that are known by the name of *Roots*, as *Red Beet Roots*, *Carrots*, &c. as likewise *Leeks*, *Citrus* or *Pumpions*, *Potirons* or *Common Pumpions*, *Garlick*, and *Sbalots*. All the rest resist the injuries of the *Winter* well enough, viz. *Cabbages*, *Parfly*, *Fennel*, *Cibouls*, and even *Taragon*, *Mint*, *Samphire*, *Tripe-Madame*, *Balm*, *Asparagus*, *Sorrel*, &c. But they sprout not till the Spring, unless forced on *Hot Beds*. Other Plants are not acquainted with that sort of help, or rather Violence, such as are all *Roots*, and *Garlick*, *Onions*, *Leeks*, *Cabbages*, &c. Add to this, that by the same expedient of *Hot Beds*, we may also raise in the height of cold Weather, little *Sallets* of *Lettuces*, with their Furnitures of *Cresses*, *Chervil*, *Mint*, &c.

There remains now nothing but to know how long each sort of Seed will keep good, upon which I must tell you, that generally speaking, most Seeds grow naught after one or two years at most, and therefore it concerns us always to be provided with new ones, if we would not run the hazard of sowing to no purpose in the Spring. There are hardly any but *Peas*, *Beans*, and the Seeds of *Muskmelons*, *Cucumbers*, *Citrus* or *Pumpions*, and *Potirons* or *Flat Cucumbers*, that last eight or ten years. The Seeds of *Coltsfooters* last three or four, and those of all sorts of *Endive* and *Succory*, five or six years. Of all sorts of Seeds there are none that keep so small a time as *Lettuce Seed*, which yet are better the second, than the first year, but yet are good for nothing the third.

## The End of the Sixth and Last PART.

## A TA-

## A TABLE Of the Chapters, contained in the Fourth, Fifth, and Sixth Parts of the Treatise of Fruit-Gardens, and Kitchen-Gardens.

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# DIRECTIONS

## Concerning

# MELONS.

**I**T is now more than Twenty Years since Monsieur De la Quintinye, being in England, that receiving the Honor of a Visit from him at my House, and falling into Discourse of Gardens, he afterwards (on my Request) sent me some Directions from Paris, concerning the Ordering of Melons; it being in Effect the same (though somewhat more ample) which was about that time Published by Mr. Oldenburg. It may not perhaps be Unwelcome to our Gard'ner, or improperly Annex'd to this Useful Part of Horticulture; especially coming from the most Th. M. R. S. Experienc'd, in relation to this delicious Fruit: However (and for what Reason I enquire not) omitted as so any particular, and full Instructions in this long expected Work of his.

*I give it therefore in the Method I long since cast it for some Friends of mine.*

J. EVELYN:



**T**HE most Undegenerating sort of *Melons* are not large, but of a middling Size, the Rind thin, faintly Embroider'd, and without being Ribb'd or divided along the Sides, or at least very obscurely: Others there are which be whitish, some of a Slate-colour, Red-flesh, dry, yet melting in the Mouth, and not at all Mealy, but of an high and generous Gust. In a word, the only sort (after Trials of many hundred Kinds) I have Cultivated with Success, and that retain their good Qualities more than Twenty Years, without any considerable Alteration.

Every Gard'ner now-a-days, knows how to raise *Melons*, but very few to Govern them; the greatest difficulty whereof is in the Guelding of Superfluities, to cause them to knit, and bear as they should do. In order to which, observe these few Directions:

The first thing appearing (after the Seed is Sown, and the Plants prick'd out from the *Hot-Bed* into a more temperate) are a pair of small smooth Leaves, which (in *France*) we call the Ears, marked 1. 1. in the *Figure* above. A few days after, 'twixt these, comes up a single Leaf, which we call the First Leaf, as being on the first Knot, noted 2. Next to this, in the same place, and soon after, there appears another, which we term the Second Knot, marked 3. About the middle of whose Stalk there shoots out another Leaf, call'd the Third Knot, *Figur'd* 4. Which Third Knot is always to be Pruned off at *Fig. 6.* but with Care, and without Wounding the Stalk or Branch of the Second Knot, marked 3, upon which that Third did grow; it being from this place you will find that Branch to Sprout, which we call the First Leader; and is that which will send out a First, Second, and Third Knot; which Third (and all other such Thirds) you must Cut, or pinch off, as you did the other, without staying 'till a Fourth, or Fifth, or more, shoot out. It is, I say, from these Knots and Joints, that other Branches in like manner will proceed, knit, and form into Excellent Fruit, provided the Foot and Original Stem have been well nourish'd in rich, warm, and proper Mould, and well expos'd.

I must not forget, that from the middle, likewise 'twixt the Ears and two first Leaves, there frequently rises another Branch, which you may abate, or leave on, as you find it likely to prove, especially if a vigorous one; but the Leaf *Figur'd* 5, issuing from the middle of the Fourth Joint, and several more besides, successively Springing out of one another, as you see the Fourth from the Third (and as all the rest I have marked do) I purposely omit, and have only *Figur'd*, as superfluous to the Ingenious *Gard'ner*.

When I Transplant from this *Nursery-Bed* (into the prepared Holes or Ridges, and open *Meloniere*) I commonly place two *Roots* together, unless I meet with an extraordinary good Plant, and then spare both the Branches which Spring from each side, 'twixt the Ear and Leaf 7, 7, as before is shew'd: But when I Plant two *Roots* near each other (as I do when they are not very fair ones) I totally reject both Branches which shoot from the two opposite Ears, to avoid that Confusion of those Supernumeraries which injure the principal Stem and Foot it self.

Never suffer the *Root*, or *Stalks* of your *Melon* Plants, to touch the Dung; nor should you Water them immoderately, but when the Earth is very dry, and the Season excessively hot, refresh, and give the *Roots* Drink, without deferring it 'till the *Shoots* complain, when it may come too late: I Water them in these parching Seasons, two or three times every Week, and in the Evenings when the Sun is Setting, and then cover them with *Matrafles*, from Eleven 'till Two a Clock; and in the Afternoon during the Sun's excessive violence, which Exhausts, and Confumes the Humidity necessary to both *Roots* and *Branches*.

I cover my *Meloniere* also when it Rains, lest too much Moisture prejudice the Fruit; all which requires a great deal of Care, and no small Pains, though this Regular proceeding is to me a real Pleasure.

When the Foot of your *Melon* Plant grows over Luxurious in Branches, cut away the feeblest of them, leaving not above three or four of the most vigorous, and whose Knots grow nearest to one another: And when the *Melons* are Knit, suffer not above two upon each Foot, choosing such as are best plac'd, and nearest to the main and principal Stem, which should be thick, snug, and not too far above the Ground. Of these that are knit, and beginning to form, make choice of the handfomest, that are well Truss'd with a thick short Tail; *Melons* with long starks, slender, and narrow Leaves, never prove worth any thing.

When you begin to Cover with Bells, raise them so upon little Forks, as they neither rest upon the Fruit or Branches, or quite exclude the Air; but so as to keep the edges from bruising, and pressing the tender *Stalk*, and Intercepting the Current *Sap*.

It now and then happens, that there rises a second Branch from between the Ears, and two first Leaves (though I mention'd indeed but one) but this is very seldom; and you are still to count them but for one Joint or Knot, though there will thence proceed a Second, Third, Fourth, and perhaps Twenty or Thirty more, and further remote, if you let them alone, and be not vigilant to restrain, and stop this exuberance in due time. 'Tis true, they will present you with Fruit at the Extremities of their Branches, but 'tis little worth, as being so far distant from the *Root*, that the *Sap* spends it self in the tedious passage before it arrives, as you'll

you'll find by the wither'd Branch, and dryness of the Leaves which should screen both Branches and Fruit, 'till they are Ripe, as we see they do, where a *Melon* has a short and substantial Foot. A Curious *Gard'ner* therefore should visit his *Meloniere* from time to time, and be Cutting off all Mutilated, Starv'd and Vicious Branches which annoy the Plants, for these Impertinents will grow even to the view of ones Eye, and quite impoverish the Fruit, if not timely prevented.

Thus you see I am careful to Purge the Stems of all the small, straggling, and unprofitable Branches, from which there is no expectation of good Fruit, whilst observing those that have well knit *Melons* on them at the ends of the Branches, I constantly take away the rest of that Branch on this side the Fruit, which divaricating into other useless Wanderers, would Rob, and deprive the Fruit of the Nutriment derived from the *Root*; nevertheless with this Caution, that in Pruning, I spare some other less Noxious Branches to shade the Fruit, that it be not left quite Naked, and expos'd to such a scorching Heat as would hinder its Growth and Maturity, which within Forty days from its Nativity and knitting into Fruit, arrives to full Perfection.

Great and Pimpion-like *Melons* are very seldom tolerably good, as arriving to their bulk either from the Nature of the Seed and Kind, or from superfluous Watering the smaller ones; wherefore (though as I said they cannot support the too excessive Heats) the less Water you give your Plants (provided you find them not to want it) the better; and that rather a little at a time than much: Once a Week is for most part sufficient. As to this therefore you must determine, and regulate your Refreshments with great Circumspection, and Judge by the Nourishment which you conceive Necessary to Produce and Maintain the Foot, with its Branches, and Leaves deriving from it; without which no Kind and Genuine Fruit is to be expected.

When you would Gather a Ripe *Melon*, you will have notice by its turning a little Yellow; for from that time, within a day (as the Weather proves) it ordinarily Ripen, and begin to cast a grateful Scent: This Yellowness appearing in some part of it or other, and not seldom with some Rift, or little Calm's about the Stalk, &c. are most Infallible Indications of its being left rather too long, than too hastily Gather'd: The *Gard'ner* must therefore not fail of Visiting the *Meloniere* at the least three times a day, Morning, Noon, and Evening, for this Critical time of Ripening. He will sometimes find *Melons* Ripen too fast, but they are seldom or never Good, as proceeding rather from a sickly, or vicious *Root*, than from the Nature of the Plant, or Species of those I Cultivate.

After Twenty four Hours keeping, or the next day after it has been Gather'd (for so long, contrary to Vulgar Opinion, it should be preserv'd in some sweet dry place) and not Eaten immediately as it comes from the Garden: A perfect and transcendent *Melon* will be Full, Juicy, and without any Vacuity (which you'll easily discern by Rapping a little with your Knuckles upon the outside of the Fruit) the Meat should also be dry, or but a little Rorid meazing out of the Pulp; but by no means Watrish and Flabby. To this add a Vermillion Colour, a grateful Flavor, and an high and Racy Taste.

Lastly, Reserve for Seed of that only which lies towards the Sunny side of the *Melon*, which being immediately cleans'd from its Mufflage, with a dry Linnen Cloth, Reserve in Boxes, or Papers, in some Temperate and Sweeter place.

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## Advertisement to the CURIOUS.

**I**T were to be wish'd that the Author (whom I had the Honour to know) had liv'd to put his last Hand to this whole Work, and added to his Potagere, the Culture of Melons in which he was the most Exquisite Master, but has in a manner quite omitted it: Nor, that what he has oblig'd the World withal, is not the most Perfect, and Consummate Piece that was ever, I believe, Publish'd on this agreeable Subject, but because 'tis said, He did himself intend it, and perhaps, to have abbreviated some Periods and Repetitions which now and then occur to the Translator, but which he cannot honestly pretermitt to justify the Version. As to what imports this little Treatise, in which I have been concern'd out of my Affection to this Sweet, and Innocent Toil, and to prevent Mistakes, and needless Circumlocution (had I over-nicely follow'd the Text) let the Reader take Notice, that I use the Word Case, indifferently, for the Box, Tube or other Vessel in which these Choice Trees are commonly Planted:

Oringist, For the Gard'ner pretending to the Culture of Orange-Trees.

Casing, or In-Casing, For the Aftion, or putting the Trees into the Case or Vessel.

Un-Casing, For the taking them out of the Case or Vessel.

Re-Casing, For the Planting them again into the same, or some other Case or Vessel.

Green-House, For the Place or Conservatory where the Trees are Inclos'd, and shut up during the Winter.

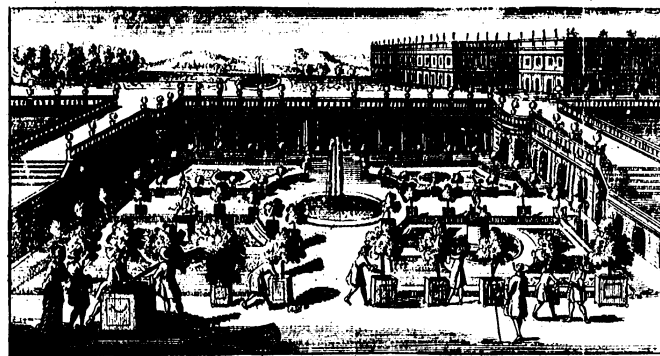
Clod (or Mot) For that Earth, Sod, or whole Mass of Mould adhering to the Roots: The rest are Obvious.

As to what the Author has mention'd in Chap. ix. speaking to the prejudice of using Fire, and supplying it with lighted Flambeaux and Lamps; besides that he no where says how the Smoak is to be convey'd out of so very close a place, nor any thing of the Number of Lights and Lamps, if the House be large and ample, which would be a considerable Charge, if maintain'd with Wax, or Oyl-Olive (for such it ought to be, to avoid the intolerable smell and fuligo's of gross and cheaper Materials) it gives me an opportunity of adding something to the Justification, and Melioration of what I lately Publish'd in the last Edition of my Hortensial Kalender. It is certain, that a Naked or Stov'd Fire, pent up within the House, without any Exit, or succession of External, Fresh, and Unexhausted Vital Air, must needs be extremely Noxious and Pernicious to these Delicate and Tender Plants: But that which answers all the Ends, and Operations of Natural Air, and the Objections against the Use of Fire, any other way save by Lamps and Flambeaux, I conceive is preferable to them. I acknowledge to have seen by Experience, that the Naked Fire, made too near the Pipes, is intolerable, melting even Cast Iron it self: But, as I no where recommend that Metal, but that the Pipes be made of Crucible Earth, and propose the whole but as a laudable Experiment; so I do not Question, but if such Pipes were contriv'd to be plac'd at farther distance from the Fire, or that there were a reasonable thick Fire-Stone laid flat, or rather Arch-wise (on which there might be strew'd a Bath or Bed of Sand) between the Naked Fire and the Pipes, to Intercept, and moderate the Intense Heat (with due regard to Register and Govern the Blast) but that a gentle and benign warmth would ensue, and such as should only Recreate, without the least Inconvenience to our nicest Exotics: Add to this, and for the more equal distribution of the Genuine Temper, that the Noles of the Pipes might easily be Inferred into a larger Pipe of Laton, which should be applied either to the blind Wall the whole length of the House within, or in the middle, which being pierced with frequent small holes, would breathe it more equally through the Conservatory: There might also be plac'd a Vessel, or Kettle, upon the Firestone-Diaphragma, to be at any time fill'd, and supplied by a Tunnel from without with Water, the Vapor of which would exceedingly temper the Pipes, and Contribute to the Perfection of the Experiment.

Facile est Inventis addere.

J. EVELYN.

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# A TREATISE OF ORANGE-TREES.

Translated by John Evelyn Esq;

## P R E F A C E.

**A**Mong the Florist Gard'ners, of whom there are a great many very able Men, one frequently meets with some, pretending as if to them alone pertain'd the Government of Orange-Trees; and would make the World believe, that the Culture of those sort of Trees is the only Master-Piece of Gard'ning; and upon this, make a great deal of shew, and talk mightily about the Preparation of Earths, and of finding out all the Ingredients which, they'll tell you, ought to go to their Composition: Nor boast they less of their In-Casement, Potting, Waterings; the setting them in, bringing out, and Exposure, &c.

There are likewise some among 'em, who carry the Secret a great deal farther, and that pretend the Kinds and Species of Orange-Trees are almost infinite, and such as (how true soever) were enough to affright the most Curious, if, as they would make one believe, every one of those Kinds did absolutely require a certain Specific Salt peculiar to them, and would imbark us upon such an Ocean of Difficulties, as hardly any Body would adventure upon a Voyage so dangerous, and where the Ship-wreck seems almost inevitable.

But, as in our Or-wards and Olitoric Gardens, where the Number of the Species, and several Kinds, do greatly exceed those of Orange Trees, Experience teaches

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teaches us, that the very same Culture does very near serve for all sorts of Kernel-Fruit, all kind of Stone-Fruit, and all-Verdures whatsoever: Upon this Experience therefore we presume, that there needs no other Culture for all the sorts of Orange-Trees, and this upon very good Assurance, daily Trials, and convincing Proofs.

I shall not therefore stand upon so many and great Difficulties, by which both the one and the other have deterr'd many Curious Persons, Passionate Lovers of the Orange Tree: A Passion, in my Opinion, the most reasonable, and best plac'd, of any; since, in effect, through the whole extent of Gard'ning, we find neither Plant nor Trees that afford us so much Delight, and that are so lasting: For there is not a day throughout the whole Year, wherein Orange Trees may not (and as they should do,) gratifie and court their Lovers, either by the Verdure of their Leaves, the Agreeableness of their Shape, Plenty, and Perfume of their Flowers; and, in a word, the Beauty, Goodness, and Durableness of their Fruit; so as I must acknow- ledge there is no Man more charm'd with them than my self.

In Favour therefore of such whose Inclinations I find so general for these Trees, I take a third Party totally opposit to the Doctrine of these Mystery-Men, and do declare, that, after a long and ample Examination, there seems nothing in the whole Art of Gard'ning so easie, and little difficult, as the Culture of Orange Trees, be it either the raising them from their first Principles, the governing them afterwards, and maintaining them in good Condition, when once they have been set; there being only the Recovery of those that are sick, of any Difficulty; notwithstanding all which, I think, one may (according to every Man's Ability,) resolve to store ones self with *Orange-Trees*, provided one have an able *Gard'ner*, and a good *Green-House*, without which, indeed, I would advise none to enter upon this Curiosity; for, certain I am, the *Orangist Gard'ner* is absolutely guilty, and to blame, either through gross Ignorance, Laziness, want of Diligence, Application, or over-sondness to his mysterious Fancies, if his *Orange-Trees* do not thrive; provided, I say, that his *Green-House* be not faulty, nor the *Earth* and *Mould* in which they are planted; or that the *Head* of the *Tree* be not disproportionate to the *Root*, or there be some defect in the *Casing*, which may perhaps be ill made, or not in fit Season, or, especially, by over-watering, and the too much use of Fire during Winter, which is not at all needful, or of Water during Summer, which should be given with great Moderation.

I shall, in the next place (after I have declared what my Opinion in general is, as to the easie Culture of *Orange-Trees*), explain, what Conditions are required in a good *Green-House*: This easie Culture, which I speak of, I know does not please many of our Doctor *Orangists*: They'll tell ye, that both those who believe it, and those who publish it, do not themselves understand it: However, without being in the least discourag'd with what they say, I shall adventure to declare my Opinion upon this Matter.

A

# A TREATISE Of the CULTURE of ORANGE-TREES.

## C H A P. I.

### Of the easie Culture of Orange-Trees.

**I**N Confirmation of what I undertake to prove in this Chapter, I advance Five Propositions, which I hold for indubitable: The First is, That we have hardly any *Plants* or *Trees* which take *Root* so easily: Secondly, That there's none which so naturally agree with all sorts of Nourishment: Thirdly, That these are the most lasting and longevous *Trees* of all others: And in the Fourth Place, That there are none less obnoxious, and subject to Infirmities: And Lastly, None that have so few particular Enemies as *Orange-Trees*.

The *Tons*, which kill our *Strawberry-Plants* at the *Root*, and the *Caterpillar*, which spoil their *Leaves*; the *Canker-worm* that cuts them off to the very Ground; the *Field Mice*, little *Flies*, and *Gnats*, which destroy our *Artichokes*: The *Gumms*, *Pismires*, small *Fleas*, that ruine *Peach-Trees*; and the *Tiger-bob* which ravage the *Pear-Trees*; all these afflicting Accidents attacking our *Melons*, and invading all our *Olitory* and *Kitchen-Garden* Furniture, are what we may truly reckon to be the greatest Enemies to Gard'ning in general; Enemies, I say redoubtable Enemies, invincible, and by consequence, a Thousand Times more dangerous than any others whatsoever that menace our *Orange-Trees*: Some Foes I confess they have, nor are they altogether exempt, as there's no Plant which is; I shall here therefore examine them one by one, and in the mean time, prescribe such Remedies as are proper for their Cure and Preservation.

The particular Enemies of *Orange-Trees* are the *Pismires*, the *Punaise* or *Bug*, *Ear-wigs*, &c. but all the Mischief they are able to do, is far from being Mortal: There's nothing more easie than a Defensive War against their rudest Inults; for first of all, as to *Ants* and *Pismires*, which sometimes come upon *Trees* in whole Troops, and gnaw the *Leaves*; they rarely invade the *Orange-Tree*, save when baited and intic'd by *Bug-Eggs*: This filthy Spawn, (as all *Orangists* well know without need of much Description) can prejudice them no further, than to make the *Tree* look all over foul, squalid, and not so agreeable to the Eye as a *Tree* should be, whose principle Beauty consists in the Neatness and Cleanness as well of its Boughs as Leaves; this sort of Filth is bred by certain winged *Mother-Insects*, but too well known by their green Colour, and nasty Smell, proceeding from their Bodies being bruised: They lay their Spawn in *Autumn*, almost as do the *Silk-worms*, and wind their Bags especially about the dry and withered Twigs, and under the foul and rumpled *Leaves*; one would take them at first but for little reddish Freckles and Spots, whilst they no sooner appear on a *Tree* (how few sower they are) but the heat of Summer following, makes them grow, extend, and swell, till they become as big as a Lentil, and then they hatch and multiply, and in *Autumn* again produce infinite Numbers of others: But as these Nests are neither errant, fugitive, or volatile, one easily spies where they fasten, and may as easily take them away, so one begin the Work betimes, and especially when first you bring the *Trees* forth of the *Green-House*: These

pull'd off with your Fingers, or cleanse'd with a little Brush, you'll immediately be secured from the *Pismires*, which give over their Hostility against *Orange-Trees* so soon as ever the *Bugs* are gone.

*Earwigs*, those little, long, reddish, nimble Insects, that now and then invade the *Orange-Trees* (sharing both *Flowers* and *Leaves*, and marring their prime *Beauty*.) are not so easily destroy'd as those we newly mentioned: But as the *Mischief* is not Mortal, reaches not to the *Roots*, and happens but seldom, there are ways enough to prevent it; as by sticking up Caps of Paper, and Neat-hoofs in several Places of each *Tree*: These pernicious small Insects, that go out to forage during Night only, you'll be sure to meet with in their Retreat and hiding-Places as soon as 'tis Day, when visiting the Hoods and Hoofs, you may crush them under Foot, and with ease dispatch them.

Another Expedient is by Vessels of Earth, Wood, Lead, or Copper made square, or round, and hollow; there are also of them of two Fashions; one whereof is to be set about the Stem of every *Tree*; the others under all the four Feet of each Cafe: Those that are for the Stem or Body of the *Tree*, are compos'd of two Pieces, which may easily be glew'd or cemented together, when they are plac'd about the Stem, and so accurately close to it, as to hold the Water you pour into it: The others consist but of one Piece, which are to be put under the Feet of the Cafes, and so being fill'd with Water like the first, are an invincible Obstacle against *Earwigs*, which being no good Swimmers, will hardly attempt the Liquid Passage. Thus are *Orange-Trees* intirely safe from Desolation by *Earwigs*. The same Vessels are likewise Protection against *Pismires*; should there any be so bold to adventure the Traject, and get over to these beautiful *Trees*, as some perhaps will try to do, though there be no more of that *Bug-Spaw* which so powerfully attracts them.

There are besides these mischievous Minute Creatures (against which *Orange-Trees* require Defence) several other great and fore Inconveniences, to which they (in common with all other *Fruit-Trees*) are obnoxious, whilst they stand abroad and are expos'd: As namely, impetuous Winds, white and pretty hard Frosts, and above all, great Hails; but since such Calamities happen rarely, a *Gard'ner* so surpriz'd is rather to be extremely pitied, than at all to be blam'd, especially in case of Hail: 'Tis a *Mischief* which comes like a Ruine on the sudden, and which no Fore-sight can well prevent, be one's Care never so great, and therefore no Remedy but Patience.

As for Danger of Winds, such as for most part are those between the *West* and *South*, seldom blowing before the beginning of *Autumn*; they give fair Warning to Remove *Orange-Trees* to some place of Shelter from their Fury; be it in some House, or under Protection of a Wall, or Grove of Trees, so plac'd and oppos'd to the Weather, as the *Orange-Trees* may, at least some part of the Day, enjoy the Comfort of the Sun.

Concerning Frosts, in as much as we seldom bring *Orange-Trees* out of the *Green-House* 'till it be towards *Mid-May*, and commonly shut them up again about the Middle of *October*: They are Times when these *Trees* are safe, and sufficiently out of their reach: These kind of Spring Frosts, which came in the tail of Winter, usually end about *Mid-May*; and the Season predicting their fierce Return, is not come at *Mid-October*: As for the small White Frosts, which some times continue till half *May* is spent, and appear again at the beginning of *October*, they do no considerable Damage to *Orange-Trees*, that are Sound and in Health: Indeed, the Sick and Crazy may suffer and receive Prejudice by them, by reason of their general Tenderness, which they would not have done if strong and vigorous; that is, well govern'd, and treated as they ought to have been.

Now therefore, being sufficiently assur'd, that the Beauty and Preservation of the *Trees* we discourse of, does in the first place, so entirely depend upon the being provided with a good and well-qualified *Green-House*, as that whoever pretends to *Orange-Trees*, is never to expect any tolerable Success and Contentment, without beginning with this necessary Precaution: It follows, that before we proceed any farther in explaining what more belongs to their Culture and Government, the *Green-House* be the first Thing we ought next to speak of, as of the greatest Importance.

## CHAP. II.

## Of the Conditions of a good Green-House.

TO the having a good and well condition'd *Green-House*, there are in my Opinion, Five principal Qualities requisite: The First is, That it be well plac'd and expos'd: Secondly, That it have sufficient Openings, and they well provided, and guarded with all that is necessary for the shutting them up close when the Season requires it: Thirdly, That the Walls be made of a good Thickness, and substantially built: Fourthly, That it be well cover'd: And lastly, That the Floor be laid even and firm. Let us now examine each of these Conditions in particular.

As touching the First, 'tis universally agreed upon, That the *Meridian* Exposure and Situation is absolutely the best, so that it may enjoy the Sun from the Hour of Ten in the Morning, 'till it sets, or is almost ready to go down. The *Eastern* Situation, which receives the Sun from its Rising till Noon, or a little after, is also very good. That of the *West*, which enjoys the Sun but from Noon to the Evening, may serve for want of the other two; whilst the *North* is very pernicious and good for nothing, as hardly seeing the Sun at all either Morning or Afternoon.

The Second Property of a good *Green-House*, namely, That it have fair Openings; requires that the Doors and Shutters be so made, as that the *Orange-Trees* may easily pass thro' them; and the Windows large, and so high, as almost to touch the Timbers which support the Ceiling, which is commonly about three Foot, and five or six Foot in breadth; so as having occasion to open them at any time in the Winter (as 'tis requisite) when the Sun shines invitingly, all the *Trees* may receive the Warmth and Comfort of his Beams: And in case any Moisture remain among them, it may be dried up by the Virtue of this bright Planet: These Windows should also be fitted within side of the House, with *Chassis* of doubled Paper, that is, by glewing the Sheets on both sides of the Frame; and without this, another *Chassis* of Glaz: As for other Shutters of Wood, they signify little, and are nothing comparable to the other, which should be accurately stopp'd, and cauk'd during the Winter, to seclude and keep out all access of the cold Air from penetrating, which would infallibly chill and abate the warm and comfortable Temper, which the Air in the House received from the Sun, when the Windows were lately open'd upon those fair Days we mentioned, and without which, the *Orange-Trees* would not preserve their good Looks.

In the Third Place, all the Walls of the *Green-House* (those especially that are to the *North*) should be built of good Free-stone and Mortar, Chalk and Sand (which doubtless is best) or of Plaster, (which is not the worst) provided the Walls be so carefully wrought, and well joyned, that there be no Crevices or void Places left between the Stones: Where Stones are not easily to be had, they may be built of Loame, tempered, and mingled with Straw or Hay; or with a double Cloison made of Boards well Rabetted, filling the void between with Earth or \* Sand, so as the Walls and Partitions, as well of the one as the other, be at the least two Foot, or two and an half, in thickness: Happy in the mean time are they, who with all this, have some other Building, dry Bank, or Grove of tall Trees to bask it on the *North*!

Fourthly, Since both the Cold and Wet is apt to insinuate and get in through the Roof and Covering, as well as through the Sides of the House: The Ceiling and Floor above ought to be of a good thickness; and besides that, be clad in Winter with a Thatch of Hay or Straw, unless there happen to be a Room or Lodging over Head, or some Gallery, whose Windows also must be kept very close shut, whilst the cold Weather continues: Or, except at least it be substantially vaulted and cover'd with store of Earth, or some such Material as we have describ'd. Lastly,

The Lower Floor of the *Green-House* (which cannot possibly be too dry) should methinks, be laid a little higher than the Area or Walk without, or at least even with it; but by no means much lower, for fear of Dampness, which is more pernicious than the Cold it self; in as much as there's hardly any Remedy for this, as there is against the other.

\* They in Holland use Chaff, or, (which is certainly better, because of Permin,) Sawdust, exceeding well dried in the Sun; giving the whole House a Coat of Pitch.

Those who have not heard what I formerly objected against the Use of Fire, (which is sometimes made in the *Green-House*) will presently conclude, that whilst I discourse of Remedies against the Cold, I would have it understood to be Fire of Charcoal, which they commonly make in several places of the House; but in truth, I mean nothing less, seeing on the contrary, I am of Opinion and abundantly Convinced, that sort of Fuel to be no less than Exitial, and hurtful to *Orange-Trees*, than either cold or wet, as I pretend to prove.

Having then spoken of the height of the *Green-House* Floor, it remains to shew, that it may be made of well beaten, hard and compacted *Salpeter'd*-Earth, or of Plaster; or which is to be preferred before all, a Floor of well lay'd Planks, &c.

By what was said of the height of the Floor, it needs must follow, that Cellars, and Vaults are very dangerous, and often Mortal, as well to *Orange-Trees*, *Lemons*, *Felismines*, *Myrtles*, &c. as generally to all *Cas'd*, and *Impotted Shrubs* whatsoever, for that such low Subterraneous places are commonly damp and moist, out of reach, and far from receiving any comfort from the Sun, without whose influence, no *Green-House* can be fitly qualified.

As to the breadth and length of the *Green-House* within side, it were not desirable it should exceed Twenty-four Feet, although it might well be made from Thirty to Thirty-six, or a little more, nor would the House be much the worse, provided the height be withal proportionable, and so dry, as neither Cold, nor Wet get entrance. They are not the Sun-beams immediately darting on the *Orange-Tree* Leaves, that are so essentially salutary and propitious to them, seeing they seldom visit the foliage in the middle, and interior parts of the branches, and head of the Tree, how ever advantageously expos'd; but they are those Rays of the Sun, which shine into the whole Capacity of the Houses, that dispel, and hinder this humidity from settling and doing the mischief.

And thus having Establish'd for a general Maxim, that supposing one is well provided of a good *Green-House*, it is easy to be Master of fair, and excellent *Orange-Trees*. I next come to explain more particularly, what my Opinion is of their Culture.

### CHAP. III.

#### Of the several parts belonging to the Culture of Orange-Trees.

TO speak of this as Intelligibly as is possible, I conceive there are five Articles to be consider'd; the knowledge of which, will be of great Instruction to the newly Curious: Those I mean, who are altogether Strangers to these Matters, and are desirous to Learn.

The First, and which is very Important for the removing of many Scruples is about the Composition of the Earth and Mould, most proper for the Nourishment of such *Orange-Trees* as we Plant in *Pots* or *Cases*.

The Second, treats of the way of Raising them from Seed, and afterwards how to Graft them; and more especially, what there's to be done to *Trees* of great, or lesser Growth, newly brought from other Countries, whether naked, strip'd, and without any Clod, or Earth adhering to the *Roots* (like other *Fruit-Trees*) or whether with their Leaves on, together with the Clod, &c. When I say, receiving them in this manner, we would *Impot* or *Cuse* them.

The Third Article, directs the Shape, and bigness of the *Cases* to be us'd, and what is to be done about the Clod, and *Roots* of such as are to be new *Cas'd*, with the manner of doing it, which are two Essential points in this Culture, and also Rules concerning Watering.

The Fourth Article, shews how to dress and fashion the heads of *Orange-Trees*, whether it be to Recover such as have been long neglected, or ill treated, or such as have suffer'd by the Frost, or humidity of Winter; or, that one would have handsome Trees, that should always maintain their beautiful Figure in health and vigour, without losing their Leaves.

The Fifth concerns the Necessary Situation of the Places in which *Orange-Trees* are to be set, when they are brought out of the *Green-House*, and (as every body knows) what time they should be carried in, shut up, and expos'd again abroad.

abroad. It also shews what is to be done, during six or seven Months, that the *Trees* are thus Confin'd; upon which, I shall in particular say what I think concerning Fire, which divers People kindle in their *Green-Houses*.

### CHAP. IV.

#### Of the Composition and Mixture of Earths, proper for the In-Casing Orange, and Lemon-Trees, &c.

SINCE *Orange*, and *Lemon-Trees*, are Strangers among us, and as one may say, come Artificially into Climate subject to rigorous Winters; as here in the Isle of France, and other Northern Countries, whereas they grow Spontaneously and Naturally in warmer places. It makes some to fancy, that this may partly proceed from some defect in the Earth that's us'd, as well as from the Air we breathe in, which causes these *Trees* to undergo some inconvenience here: And upon this, every Gardener makes a wondrous Mystery, forsooth, of certain peculiar Compositions of Earths, &c. And of this, there are various Contests, and very different Opinions. For,

Some will have the main Importance of the Mixture, to consist as well in the Plurality of Ingredients (especially if they be hard to come by) as in the several Doses: Others, in the frequent removing and stirring the Mould, so blended together; without which, they conceive all the rest unprofitable, and of no effect. There be others, who stand much upon the Antiquity, and Age of the Composition; and that what has been longest made and prepared, is best: Some again, for that which has most been stirr'd. In fine, most of them make chiefest Account of the lighter Ingredients for their Mixture, namely, such as is Sifted, and reduc'd to Powder, The Marc of Wine, Earth of an old Hot-bed, &c.

I should never have done, should I speak particularly to every Orangist's Conceit upon this Subject: 'Tis certain, there's hardly one of them but pretends to some rare, and peculiar Secret, that no body has save himself, and which he would not impart to another for any thing in the World. I'll suppose they all have reason to be satisfied with their manner of proceeding, nor is it for me to contradict them, none ever heard me Censure them for it: In the mean time, for my own part, as I think I have made choice of a Method Easy and Simple, and that appears to me very conformable to the general Course and Order of Vegetation, and particular Nature of the *Trees*, under consideration, I shall endeavour to explain it to the Curious, and let them see with what Success I have long made use of it effectually. There are also, divers other Worthy Persons, who have thought good to pursue my Method for their *Orange-Trees*, who shall be my Vouchers.

But before I enter far on this Explication, I declare again (once for all) that whatever the Earth produces, be they Plants, or Trees, there is none of them, (as to their Culture, their Complexion and Constitution) more Easy, Tractable, and (as I may say) Accommodant, than are *Orange* and *Lemon-Trees*; the different manners they are Govern'd by, in several places, visibly justify it. One may, in my Opinion, fitly resemble them to those Healthy, and Vigorous Youths, who Abandoning themselves to Debauchery, and disorderly Courses, their Juvenile strength does, for all that, often Repair the breaches of their irregular Lives; but it lasts but for a certain time, the Young Person, accustoming his Body to that, which in fine, must absolutely destroy him, or at least extremely alter, and impair its Robust Composition. 'Tis just so with our *Orange-Trees*, which are Naturally wonderful, strong and lively; so as by that, they easily Repair whatever Nourishment (though little agreeable to their kind) it be, that may corrupt and spoil them. It is not with these *Trees* as with certain other Vegetables, some of which will thrive and live no where, but in a dry and light Soil; others, save in the Fat and Moist, whereas *Orange-Trees* live in either, but by no means thrive so well in one, as in the other.

That which I would especially recommend to Observation, concerning the Culture of *Orange-Trees*, which (as we said) are but Strangers to our Climate, is to take good Notice out of what sort of Earth they were brought, and did Naturally grow in, and accordingly endeavour to Replant them in the like, as near as one can guess: By this Inquiry, I have found that they most Naturally thrive, and grow

grow to Perfection, in Strong, Fat, and Heavy *Earth*, and from thence conclude, that it were convenient, by Art, (which should ever imitate Nature) to prepare Mould that were accordingly Rich and Weighty: But forasmuch as these *Trees*, Mould that were accordingly Rich and Weighty: But forasmuch as these *Trees*, being set in *Cases*, this heavy Fat *Earth*, which is to Nourish them (without receiving any Assistance from the Neighbouring Mould) would be apt to grow dry, and hard almost as a Stone, so as becoming unfit for *Vegetation*, the *Roots* cannot and spread and extend themselves, without Administering some Succour to them. It follows, that of Necessity we not only afford them due Watering and Refreshment, but such as may easily, and universally penetrate throughout, and therefore some means must be found, that this *Earth* be well, and industriously stir'd, and made loose, to correct its Natural Sluggishness.

But you'll presently Object, as to this dull and heavy *Material* I do commend, That the Sun, which looks but obliquely upon us, cannot have the same effects as it has in those *Climates* where it Darts its Beams more directly. This is the Common Objection of our *Orangists*. To which I reply in the first place, That as every body sees (and is confirm'd by daily Experience) the Heat which we have here during the four or five Months in which our *Orange-Trees* are expos'd, is sufficiently great to make them Live, and that with a great deal of vigour for a long time. In the second place, That the *Cas'd-Mould* being open to the Air, and consequently visited on every side by the Sun, receives the Impressions of its Heat almost as freely, as what being in the wide and open Field, enjoys its Beams on the Superficies only. And lastly, That the *Earth* being thus made loose, as well as ponderous, is by this Expedient render'd easie and compliant for the *Roots* to spread in, and for the *Water* to penetrate and refresh it, and by so much the more dispos'd to entertain the impressions of the warmth which it requires: And thus we render it capable of receiving that by our Art, which would be superfluous, and too much in the hotter Countries.

Upon this Foundation and Reason, (be it in what Country soever) I endeavour to find out the best, natural *Common-Earth*, and least Stony that I can light upon in all the Neighbourhood: That is to say, Mould which has substance, and is pretty solid; by no means Clay, which I look on as Dead, but such as all sorts of *Plants* seem naturally to delight in by their growth and thriving. Nor am I much concern'd what colour it is of, though for the most part, and to sight, the blacker be most agreeable and approv'd of. For Example, That which is proper for *Hemp*, good *Wheat*, or *Pasture-Ground*, or of an *High-way*, or that lying low, it receives the *Water*, and Drainings of some higher rich Ground. Of this *Earth* I take as much as I have need, and without farther trouble of preferring that which lies uppermost, (and which indeed, is the best in most Mens Opinions) I rather choose that which lies undermost, provided it appears to be of the same quality of choise that which is above it, ever seeking that which is freshest; I mean, that which hardly ever saw the Sun, and consequently, has never yet served to the Nourishment of any *Plant*; so as 'tis not only to be presum'd, that it retains in it all its Original *Salts*, but a good part likewise of that which the upper, and Incumbent Ground, through which it has been the drain, contributes to it.

After this, visiting the Folds, I procure dry *Sheeps-Dung*, reduc'd almost to Powder; (and which is to be had in almost every Country) or for want of that, I seek for Soil where *Sheep* have formerly been pent; than which, there is nothing better and more Sovereign for the *Trees* we speak of. But in defect of this, I use either the Mould of well-rotted Leaves of *Trees*, or of an old *Har-Bed*, that has not been over *Sod'd* and *Water'd*, without ever meddling with the *Mare*, and *Hicks* of *Grapes* for Reasons I shall alledge hereafter.

Now (as I said above) I would have the Mould which I prepare, weighty, and yet so loose withal, as whilst it being solid and material, it fall not of producing good and substantial *Roots*, such as it could not do in lighter *Earth*. On the other side, it being thus loosen'd, the *Water* and Refreshments, together with the warmth of the Sun may the more easily penetrate it, than possibly it could, were it altogether *Consipat* and over-heavy. Considering then, how many *Trees* I have to *In-Case*, I accordingly order my *Composition*, by taking, at least, one half of that Natural *Earth* which I find near at hand, (and which is that which gives it that weight, and solidness which I judge convenient) proportionable to the other half, which I compose of Powder'd *Sheeps-Dung*, if I can procure enough of it; and if not, of those other *Ingredients* I before have mention'd, viz. Mould of the Old *Melon-Bed*, or of *Rotted Leaves*, and all these in almost equal *Portions*, which makes the

half of my *Mixture*, and imparts to it that lightness which I desire. All this do I mingle together the very same day I have occasion for it (if I could not dispatch it some days before) not thinking it at all necessary to have prepar'd it much sooner; and that which induces me is, First, That every *Particle* of *Earth* contains evidently in it self, its peculiar *Vegetative Salt*. Secondly, 'Tis certain That no *Grain*, or *Particle* of *Earth* does enter into the Body of another *Grain*, much less into the Bodies of the *Roots*, which only common *Water* does, which drenching (as I may say) the borrow'd *Earth* with the *Salt* of every part, receives more or less, according as the *Earth* is more or less charged with it: And this *Water* so Impregnated, and Season'd with the *Salts* of those good *Earths*, is that which (as we have often noted) administers to the *Roots* that Food and Nourishment which forms their *Sap*, which we affirm will be found so much better, according as the *Earths* (through which the *Water* has drain'd) renders them more Fruitful, and above all less Diluted.

This being so, it follows, That the staleness and oldness of the *Composition*, signifies no more to its Melioration and Improvement, than the frequent stirring of it. On the contrary, methinks it were to be wish'd, that this *Mixture*, once made, and the *Earths* cast into Heaps, were cover'd from the Rain, lest the *Waters* falling upon them, wash, and carry away the best part of it, and scatter it unprofitably about the sides or bottom of the whole Mals.

Now to make our *Composition* the more speedily and easily, and indeed with more exactness; having first cast all the *Materials* into several Heaps, pretty near to one another, I caule as many Men as there are different *Ingredients*, with their Shovels and Spades, standing by their respective Heaps, to cast it equally, and in equal *Portions* Pell-mell in some void place near them. For instance, If I have but one single Heap of good *Earth*, and another of *Sheeps-Dung*, there will need but two Men to fling them equally from their Heaps, to make another Heap: And if with the Heap of good *Earth*, I have two or three of those other *Ingredients* mention'd, I place as many Labourers near that single Heap of good *Earth*, as I do at all the other Heaps. And thus at one, and the same instant, as a Shovel-full of *Stuff* is thrown from each of the two or three separated Heaps, there may (at the same time) be cast as many Shovel-fulls of the single Heap of good *Earth*: And so my *Composition* is soon finish'd, and made exactly, without losing any time, or of making a greater quantity, or removing more *Ingredients* than one needs.

From that which has been said, it appears, That I neither much look after the *Earth* of *Drains*, Dry and Old *Rotted Dirt*, *Marshy*, or *Castings* of *Ditches*, *Pidgeons-Dung* and the like, as well because I can be very well without them when I have the others which put me to no trouble in finding (the facility and easiness in *Agriculture* being that which infinitely Charms me) as especially, because I esteem them preferable, and much better, to as I never make use of the other when I can have these at hand, but upon the utmost Exigence and Necessity.

By this you also see, I do not *Plant* in pure and simple *Earth* only, and less yet in that which is finely Sifted, as do divers *Gard'ners*. Indeed, *Orange-Trees* will I confess, make pretty *Shoots* in this *Powder'd-Mould* for a year or two, but 'tis as true, that they make no *Clod*, or *Union*, so as 'tis very difficult to *Case*, or change them upon occasion, without danger of leaving no Mould cleaving about the *Roots*; without which, you must look for nothing during that whole year, nor the next, but the dropping of their Leaves, whereas such as are *Planted* in my *Composition*, retain a fair lusty *Clod* about them, from which one may (and as indeed one should) pare off a good part when you *Re-case* them, so that as well the old *Roots*, as old and exhausted *Earth*, may be sufficiently abated, without any Peril of losing the *Leaves*, or Risking the *Tree*, but, on the contrary, make it stronger, and more beautiful, and begin to put forth considerable *Shoots* that very year.

This also shews, how little I attribute to the *Mare* of *Wine*: And first, for that the *Water* which must retain the Taste and Quality of *Wine* (as in effect it would, if the *Mare* contain'd in it any, the least sort of moisture, the *Water*, I say, in which it were infus'd, participating of it) is really, not only improper, and not at all good for any kind of *Plants*, but extremely pernicious to them. In the second place, For that this *Mare*, consisting, as it does, of three things, which contain in them no fort of Juice (namely, the Stone or Kernel, the Skin, and the Stalk) furnish nothing of advantage to *Vegetation*, for the Kernels are commonly as hard as little Stones, which scarce ever rot or turn to *Earth*; the Skin, and Stalks for having been extremely press'd, can yield nothing at all of Nourishment. And all this we

find, in as much as the Water, wherein the *Mares* have been macerated, and infused a considerable while. has no manner of Taft or Relish in it; whereas the Water which has percolated, and pass'd through *Sheeps-Dung*, or an old *Melon-Bed*, &c. sensibly retains in it something of extraordinary, as appears by the Acrimony or the Taft it leaves.

To conclude, After all the Pains that I have taken, I never yet observ'd that the *Mare* of Wine did Impinguate, and Enrich the Ground; it renders it indeed somewhat lighter (but without imparting to it any other Quality) and that's what I strive chiefly to avoid in *Earths* for *Orange-Trees*, not only because I would not have a *Mold* too light, but above all, that what does give it the lightness requisite, should carry with it also something of more Useful and Sovereign towards the Nourishment of *Plants*. Besides, if the *Mare* of Wine were of that Absolute Importance for *Orange-Trees*, what should they do, or rather what had they done, who having *Orange-Trees*, live in colder Countries, where Vine-yards do not succeed or prosper?

Add to this, That as to the Moist and Colder *Climates*, and indeed other places also where the Soil is Churlish and over Binding (approaching the Nature of Clay) the *Earth* for *Orange-Trees*, ought to have good and sufficient quantity of *Sheeps-Dung*, or of those other light, and tractable *Ingredients*, apt and dispos'd to warm and heat; but which is not needful in hot, and more temperate Countries, or in the good *Earth* of other places, so as on such occasions, one may go as far as two Thirds of *Sheeps-Dung*: And this last Composition is I assure you, very proper and good to raise any sort of *Plant* in whatsoever, whether in *Pot* or *Cafe*.

## CHAP. V.

*Of the manner how to raise Orange-Trees from the Seeds, and afterwards to Graft them: How first to Cultivate those which are newly brought to us from the Countries where they grow and live without Art, whether they come Stripp'd and Naked, without Clod, or with it, having some Leaves upon them.*

**TOUCHING** the first Article, we have this to say, That though it be true, that the Branches of *Orange-Trees* in certain *Climates* (those especially which come in Bundles, will take Root of *Suckers*, as easily as with us *Goose-berry*, *Fig*, and *Quince-Trees* do, &c. yet in these Countries here, where there is not that facility, we seldom raise them but from the *Seeds*, and such as we get from very *Ripe*, or *Rotten Fruit*: The Month of *March* is the proper time to Sow them, either in *Earthen-Vases*, or *Cases* fill'd with *Sheeps-Dung-Mold*, or that of the old *Melon-Bed*, Burying what *Seeds* you intend to Sow, two or three Fingers deep, in Rills and Lines, or in Holes at two Inches distance, and at this nearness, that at the least some of them may take, if not all, and with purpose to thin, and pull up Supernumeraries where they stand too thick, that those which are left may thrive the better, as in a short time they will do.

Preparatory to this Semination, choose of the best Species and Kinds of *Oranges*, especially of the *Bigarades*, which will produce, and furnish you with *Wild Stocks*, that in two years time may be fit to Re-plant at greater distance, and by this means so increase in Growth and Subtance, as that at the end of five or six Years (if care be taken to Dress them, either by frequent, but gentler stirrings of the *Earth*, ordinary Watering, and discreetly Trimming and Pruning them) they will become fair and lussy *Stocks* fit to *Graft* on.

And this is done two manner of ways: The first, and most frequent is by *Inculcation*, and *Grafting* in the *Escauchen* in the Months of *July*, *August*, and *September* as they do other *Fruit-Trees*, and that as near the *Earth* as conveniently you can, that it may send forth a *strait*, and fair *Shoot* from the *Shield*: The second way is *Grafting* by *Approach*, which is done in the Month of *May*, but for this Operation the *Wild Stock* had need be of some considerable Subtance and Growth, because the *Head* is to be cut off to make the *Incision* or *Gash*, and sometimes a *Cleft*, in which to *Apply* or *Approach* a Branch of the *Orange-Tree* of whose Kind you desire a *Graft*. In Adjusting these, you must cut away a little of the *Rind*, and of the Wood of both sides of the Branch, and so insert and apply it neatly to the middle of the *Gash*, and then with a *Plaster* of soft *Wax*, or *Clay*, and wrapping

ping that about with a *Linnen Rag*, bind all close together, so as it may resist the *Wind* until towards *August*; when, if you perceive the *Graft* has taken (which you'll find by the vigorous *Shoot* it makes) you may then separate the *Stock-Graft* from the *Mother-Tree*, by *Sawing*, or *Cutting* the *Approach'd Branch* just before the place where it was bent down.

After the same manner are *Grafted Lemon-Trees*, and that indifferently; *Orange* on the *Lemon* and *Orange-Stock*, as well as the *Lemon* upon either, though indeed the *Orange* does better upon its own Kind, than on either *Lemon* or *Balotins*.

'Tis ealie to distinguish an *Orange-Stock* from the *Lemon*, for the latter has a *Yellowish Bark*, the *Orange* *Greenish*; besides, that the *Leaves* of *Orange-Trees* have near the *Stalk* a little foot at the bottom of the *Leaf*, shaped like an *Heart*, which *Lemon-Trees* have not. Moreover, *Orange-Trees Grafted* on the *Wild Stock* of their own Species, commonly make a more vigorous *Shoot*, and are less obnoxious to shed their *Leaves*, than what are *Grafted* on the *Lemon-Stock* or *Balotins*.

Here about *Paris*, we seldom raise either by *Seeds* or *Grafts*; none save the *Curious* for *Tryal* sake, will put themselves to the pains of it, since the *Genoa* Merchants so easily relieve us of that trouble, where they raise them with such success, as well for the Profit they make of them, as for our Satisfaction. There come Yearly to us in the Months of *March*, *April* and *May* in great abundance, both *Orange* and *Lemon-Trees*, strong and lussy *Plants*, and that at very reasonable Price, as well such as have no *Clod* or *Earth* about them, as those that have.

The main thing is, how to preserve such of either Kind as are well-condition'd: That the *Stem* be *strait*, even and sound, not gall'd any where, and of competent height, as about a Foot and a half, or from two Foot to a Yard, or four Foot; That the *Roots* be also sound, and look as if but newly drawn out of the *Nursery*: That the *Cold*, *Wet*, or too much *Heat* have not dried, chill'd, or any way injur'd them by the way; either of all which defects, may have utterly spoil'd them, and made them good for nothing. These, and other Infirmities, you may easily discover by *Cutting* or *Peeling* a little of the *Rind* of the *Stem*, *Branches* and *Roots*, which should be pretty firm and close, and of a yellowish Green; the *Bark* also loosen'd a little from the Wood, should be found of an Oily Moisture, which is the Effect of the *Sap's* being plentifully in it. On the other side, if the *Bark* be too soft, or rather rotten, or very rough, hard and dry, they are *Mortal Symptoms*, and you'll commonly find the Wood underneath the *Bark*, to appear blackish and spotted, and such are only fit for the *Chimney*.

Those *Trees* which are brought us without the *Earth*, or any *Clod* about the *Roots*, and have yet perhaps other good Marks, are to be *Trim'd* from *Head* to *Foot*: The *Head*, that is to say the *Branches*, being commonly *Naked* and *Bare* of *Leaves*, should be sufficiently *Prun'd* and *Abated*, and so order'd, that new *Shoots* may *Spring* from their *Tops*, fit to be form'd into beautiful, and handsome *Heads*, round and full, as we shall shew in due place. As to the *Roots*, be sure to cleanse them well from their *Hairy Fibers*, which for the most part you'll find quite dry'd and shrunk up; and take so much off the other *Roots*, that you leave not the very largest, and best grown above four or five Inches in length, and in proportion the least also, *Cutting* those that are spoil'd by any *Galling*, or *Bruise* quite off to the very *Quick*: And this done, plunge the *Roots* for five or six hours into common Water, and then Plant them in *Baskets*, *Tubs*, *Cases*, or *Pots* fill'd with good *Mould*, a little lighter than that which is compos'd for *Grown Orange-Trees*, such as you have had a good while, and that have their *Clod* about them: For these new *Plants* therefore, there needs not be in the *Composition* of the *Mould* above a quarter part of the groffer *Earth* at most, the rest being of the above-mention'd *Ingredients*.

When this is done, place the *Baskets*, or *Vases* in a moderate *Hot-Bed*, made in some shady Place where the *Sun* does but a little Peep through; or if more expos'd to its *Heat*, which may dry and injure the tender *Plants* during the first hot Months, in this case you must cover them with *Matresses*, or *Canvases*, so as preventing these Inconveniences, you may yet give them *Air* in *Rainy*, *Close*, and *Cloudy* Seasons, being also careful to Water them from time to time moderately, and with discretion, so as the *Mould* may remain always a little Moist; yet so, as that the *Earth* in the *Cafe*, may enjoy some, be it never so little (since a very little is sufficient) of the warmth, and comfort of the *Hot-Bed*: But by no means too much, for that were worse than none at all.

Arm'd with these Cautions, you will be able to save most *Orange-Trees* so *In-Cas'd*, *Potted*, or in *Baskets*, leaving them in the same *Bed* all the rest of the Year, until towards the middle of *October*, when you are to remove them to such a *Green-House* as we have recommended, or else made them a warm Cover as they stand, with dry Dung and Litter well Matted, &c. sufficient to preserve them from the Cold of Winter to the end of *April*, or the beginning of *May*, when you shall take them out of this first *Cafe* or *Pot*, together with *Earth* and all; or if in *Baskets* (which commonly you'll find Rotten at the Years end) put them as they are, into new, and proportionable *Cafes*, without troubling your self about taking any of the Rotten *Basket-Twigs* away, lest by letting in the Air, you prejudice the tender *Roots*: This done, give them the ordinary *Dressing* and *Culture* as hereafter we shall direct, from henceforth beginning to form the *Head* till it arrive to the utmost Beauty it is capable of.

Thus much touching *Orange*, and *Lemon-Trees* brought to us with the *Clod*, *Branches* and *Leaves* about them. As for such as come with all this Furniture, you are First, To Examine whether the adhering *Clod* be Natural, because they are sometimes Artificially Clump'd, and Daub'd about the *Root* with Clay after the *Root* is Cut; but this is easily discover'd by the manner of the small *Roots* clinging to it, for if it be Natural, it will stick very firmly to them, but if loose, 'tis a certain sign of Knavery: And if it be only such as has apparently been thus applied, take it all clear off, if otherwise, abating very little, let most of it remain, since 'tis likely to be no great quantity, and then you need only refresh the *Roots*, by pairing and shortning them discreetly. But for the others, they are to be Treated as has already been shew'd, where we speak of such Young *Orange-Trees* as arrive without their *Clod*.

Having thus perform'd what is necessary about the *Clod*, you are in the next place to Work about the *Head*, and consider how to give beginning to the most agreeable Figure; which you shall do by taking away a great part of the little small, straggling *Branches*, you find to grow Confus'dly, Cutting also the grosser ones off, which you see hinder the Symmetry and Beauty of the *Head*, which should be reduc'd to a perfect Round, and Full.

This done, Bathe the *Root* a good quarter of an Hour, namely, so long as (that being quite under Water) you perceive any Air-Bubble to rise, and then let it as long to Drain. Lastly, Place it in your *Cafe*, after the same manner we commonly do *Orange-Trees* out of an Old *Cafe*.

## CHAP. VI.

*Of the Size and Bigness of good Cafes, and other Circumstances relating to them.*

THERE needs no great Directions about the Bigness and Shape of *Cafes*, which ought to be of Capacity made proportionable to the Growth and Substance of the *Trees* which you would Plant in them. A small *Tree* would appear as ridiculously in a large *Cafe*, as a great *Tree* in a small one; but with this difference in the mean time, That the latter would Languish, and be in danger of Perishing for want of competent Nourishment, it being impossible a great *Tree*, together with all its *Roots*, should find sufficient to maintain Life in a Vessel that contain'd but little Matter, whereas a little *Orange-Tree*, in a great and large *Cafe*, would run no such danger, but be in effect the same as if it had been Planted in the wide and open Field.

I am not of some Curious Mens Opinion, who hold that large and ample *Cafes* hinder the Growth, and Thriving of young *Orange-Trees*, unless they also imagine they would grow and be worse in the plain *Earth*, and open *Field*. 'Tis a great mistake to think that a single *Root* produces nothing of it self; let it be never so thoroughly heated, it will never exert any thing, if it be not Animated with a certain *Vital-Principle*, as I have fully demonstrated in one of the Chapters of my *Treatise* of Reflections. Now the Impression which must promote this Activity, seems to proceed more Naturally from the Superficies than from the sides.

What remains to be spoken concerning *Cafes*, is the Figure, which every body knows to be Square, for though they sometimes make little Round ones, and other Oblongish,

Oblongish, they are not so agreeable, unless the height (without reckoning the Feet) correspond, and answer the length; for to be large and low, or high, and but narrow, is very unsightly: The Foot ought therefore ordinarily, to be from five, to six Inches high, for *Cafes*, that are in height from one Foot and half, to two or three Feet. They may be some Inches shorter, if they be not above eight, ten, or twelve large; or be allow'd some Inches more, if of three and half, or four Feet, which are the largest Size we see any where us'd.

The best Timber to make *Cafes* of is Oak, as the most durable: Firr, Beech, Chesnut, &c. are by no means proper. *Cafes* may also be made of Barrel-board, or Pipe-staves, when they exceed not Twenty, or Two and Twenty Inches; but if more, of good Clap-board, and Waincot full Inch thick, they will else be apt to break, and be disjoyned when they come to be remov'd and carried by the Lever, especially being large, full of Earth and heavy.

'Tis of great Importance to have their Feet of sound Oak, and made Square, and Proportionable to the bigness of the *Cafes*: Also, that the Bottoms be very substantial, supported with Bars well Nail'd and fasten'd, that they may be able durably to sustain their Burden, and secur'd from becoming Rotten, to which the frequent Waterings make them obnoxious: For it were desirable that the *Trees* might continue in the same *Cafes* many Years without any necessity of Change, every Removing and Alteration being prejudicial to them. One should likewise take Care, that the Bottoms of the *Cafes* hold stanch, and without starting; and that they may last the longer, it were in my Opinion requisite to give the Inside a good Priming or two, with some Oil-Colour'd, no matter what it be. This may perhaps seem needless, but I assure you upon Experience, you'll find it worth the Expence in the durableness of your *Cafes*, and the benefit of the *Orange-Trees*; which being thus accommodated will not need to be so often chang'd, provided you Govern them as I have shew'd, and that you *In-Cafe* them pretty high, and tread the *Earth* well at the bottom before you Re-plant them.

Every body knows that the bottom of the *Cafe* should be bor'd through in several places with an Auger, if the Board be joyn'd close, or else be laid at some reasonable distance one from another, Bar-wisely, for the more commodious draining, and passage of the superfluous Water, and often Refreshments.

If the *Cafe* or *Box* be of two Foot and half Size, it were convenient to give it an Iron-plate at each Corner, and under the Bars below, that the Levers (which you must of Necessity make use of, to Lift and Transport so great a Burden by) do not break any of the Bars. I would also Advise, that two of the sides of the Boxes were contriv'd with Wickets, to open and shut at pleasure, by the help of some Iron-Bars and Hooks, to hold them fast in: Not that hereby one may give them an half *In-Casing* upon occasion, a thing I neither approve of or use (for Reasons hereafter) but that when ever there really is need of *Re-Incasing* large and great *Orange-Trees*, one does the more easily take them forth their Old *Cafe*, with the greater part of the *Earth* and *Clod* adhering, which one cannot so commodiously and safely do otherwise, without danger of breaking and disorder. Let us next shew how they are to be *Re-Cas'd*.

## CHAP. VII.

*Of Re-Casings, and the best manner of doing it.*

RE-CASING an *Orange-Tree* is sometimes Necessary, either for some defect in the *Box*, or in regard of the *Tree*: As First, When a *Box*, or *Cafe* is so broken through Age or other Accidents, that it cannot be removed without Detriment to the *Tree* it contains; or when it is too little and has not sufficient room to nourish, and entertain it in any longer.

Secondly, When one suspects, or foresees the Ruine of a *Tree* by the Weakness and Languor of the *Shoots*, the Yellowness of its *Leaves*, the smallness of the crumpled *Flowers*, &c. Or that in fine, one of the most principal Perfections, and Beauty of an *Orange-Tree* being (in my Opinion) its yearly putting forth Lusty, and handfom new *Shoots*, if it have fail'd in so doing the last Spring, 'tis to be presum'd there is something in Fault, and that though it may haply bear a Florid, and Green Leaf of the last two Years, 'tis evident yet that it does no

more receive that due Nourishment in the *Cafe* which it requires: And therefore be it that the Mould is too Old, and much exhausted, or the Box too narrow in regard to the quantity of the *Roots*, on either of these defects, a new *Re-Casing* is to be resorted to.

Happy those *Orange-Trees*, or rather Happy the Master of them, that has an able and Skillful *Gard'ner* to Govern 'em, and the Sagacity to prevent these Accidents, by a timely *Re-Casing* before his *Trees* complain or suffer; being careful to do it before these Infirmitates seize too far upon them, and perform it dextrously with all the necessary circumstances: He may then in the first place, be sure his *Trees* will regularly maintain their *Leaves* and *Verdure*, which is no small Matter-piece; and in the second place, find them to shoot (that very year) almost as freely as if they had not at all been *New-Cas'd*, which is another extraordinary advantage. Thirdly, Supposing it to have already attain'd as beautiful an Head as we have fancied in our Idea, there will be no farther need of Working upon that, or using the Knife, though haply it may be convenient to pare away, and abate about two third parts of the *Clod* and *Earth* which is about the *Root*; and thus have you an *Orange-Tree* perfectly well *Re-Cas'd*.

'Tis therefore very necessary to *Re-Cafe* (though the Tree may have been never so well Treated) whenever we observe it to have pass'd a Summer without continuing to make as vigorous a shoot as 'twas wont to do; since being neglected, until we find our *Trees* actually sick, and in an ill condition, one may assuredly conclude, that either the same year, or the next after, they'll in all probability lose their *Leaves*, and that the very year of *Re-Casing* they will make no shoot at all, or if they do put any out, none but such as are very feeble, wretched and miserable ones, with small round Flowers, most of which will drop before they be spent or wither'd; so as of necessity, you will be oblig'd to cut off a very great part of the old Branches, and sometimes the entire Head, to ones infinite vexation, to behold the poor *Trees* in this sad and naked condition, and that for so long a time before they will recover, or afford you any satisfaction.

It is fit you should have notice, that sometimes a *Cas'd Orange-Tree* (be it one brought from hot Countries, or that has only been newly chang'd into another Box) may now and then remain two, or three years without pushing either *Roots* or Branches, whatever pains one takes about it, which is very irksome: But even in this case, one is not presently to despair of the Tree, or cast it away, seeing so long as the Stem and Branches continue fresh, you may be sure it is alive, and may for all this Emerge. Nor will I advise you to change its *Cafe*, but to continue your wonted care of him as he stands, and you'll after a while find him to Recover, and answer all your Pains and Patience, if familiarly happening, that this Lethargy and Benumbness (from I know not what unknown and secret Cause) is at last vanquish'd and overcome: But where an *Orange-Tree* that (for instance) has been *In-Cas'd*, and diligently Dress'd for three or four years, ceases for a whole Twelve-month to Spring at all, you may (as already we have noted) conclude that he is beginning to be Sick, and speedily *Re-Cafe* him the next year following. To perform this well, you shall first of all pare off two Thirds of the Old Mould or *Clod*, which indeed looks very frightful at first to those who are yet unacquainted with the Government of *Cas'd Trees*: Though it be indispensably necessary at every *Re-Casing*, especially if the Tree has been in the Lime Box four or five years, or perhaps a longer time; for 'tis sometimes expedient to diminish, and take away a half of its *Clod*, as when through the negligence or imprudence of former *Gard'ners*, you find a Tree become excessively Gross and Over-grown, for want of being duly Prun'd and Trimm'd on its precedent *Re-Casings*. The second thing to be done in *Re-Casing* well, is before you begin this Important Work: In the first place to consider the Mould and Earth of the *Clod*: In the next, to see what condition the *Cafe* and Box is in. As for the Mould, if you find it over light, and that you conceive the *Root* has but a small *Clod* about it, you must then Water it plentifully the day before you stir any thing, that so the Moisture may cause it to adhere to the *Roots*, least otherwise the Earth fall wholly away from them, leaving them quite Naked when you come to take the Tree out of its *Cafe*; but if you perceive the Earth to be solid and material, so as in likelihood the *Root* has a sufficient *Clod* about it, you may altogether omit the previous Watering, and proceed to *Un-Case*: The Earth will hold well enough to the *Roots*, and you may Work without any danger.

As for the Box, you were before to consider, whether it be fit to serve any more; and if so, to Reserve it: If not, to dispose of it accordingly. Now for the saving

of the *Cafe*, be it with a Wicket, or (as ordinarily) without any, you should with some fitting Instrument, Howe, or Trowel Scrape, and take away from about the *Roots Clod* and all the four sides of the *Cafe*, as much old Earth as until you can conveniently arrive at the *Clod*; and then also, pare off as much of the ancient *Roots* as you can without disordering of the *Clod*, of which you should leave three parts. This is a necessary Operation for the cleansing of it quite round, which otherwise you would not be able to reach and come at. This done, lift the Tree out of the *Cafe* with either strength of Arm, if it be not too heavy, or by the help of a Crane, Pulley, and Ropes if it be of too great a bulk; and so without demolishing any part of the Old *Cafe*, you may keep or make use of it again, either to *Re-Cafe* the same Tree in, or some other, whilst the former, with some small Reparations, may last perhaps four or five years longer: But if you find it not worth the mending, let it be broken up for the Fire, and so you shall come to the intire *Clod*, and as before, abating about two Thirds, or more of the Mould as you see cause, since in either respect, Retrenchments are to be made as well on every of the four sides, as underneath, scraping away so much of the old Exhausted Earth, as till you discover, and lay bare about two Inches of the ends of the *Roots* that had been Cut, to be Revealed and turn'd in *Re-Casing* with new and fresh Mould (as shall hereafter be shown) that so they may at their Extremities, put forth new and lusty *Roots*, sufficiently to *Re-establish* the Tree.

By the way, I Advertise, that in *Pruning* the *Roots*, which you will find twist'd and intangled one within the other, you be careful to take clean away all that you Cut off, without leaving so much as a Fragment, or Chip remaining, thereby preventing the Rotting, and Infecting of their Neighbours, which were very dangerous. In a word, after these Retrenchments made of Earth and *Roots*, if the Weight and Bulk of Earth permit, I Counsel you to dip it in some Tub, or Vessel full of Water or Fountain Basin, deep enough to cover the intire *Clod*, and there to let it remain as long as the Water Works and Boils about it; for so it will, soaking in by degrees, where the ordinary Waterings could not penetrate, and consequently, the Earth excessively dry'd, and Water taking place, will force out and expel the latent, and prejudicial Air which causes the Ebullition and Disorder.

So soon as the Boiling ceases, take the drenched Tree out of the Water, and placing it on some Block or *Cafe* laid side-long (or any thing that stands a little higher than the Ground) there let it rest until all the Water be drain'd from it, and it have almost quite done dropping: For this Reason, That whilst the *Clod* is thus streaming, should one put it into a new Earth'd *Cafe*, it would make it all into a Mortar, which were very pernicious to the Tree; for being necessarily oblig'd to press, and close the Mould to the sides of the *Clod*, and crowd as much into the *Cafe* as is possible, as well about the Naked *Roots*, as where ever one finds a void, it could not be, but the Earth thus moisten'd, beaten and press'd would turn all to pap and Mortar, which would at last grow hard, and petrify like Stone, by all means to be prevented.

Now in case the *Clod* be too big to be thus plung'd in Water: When the *Re-Casing* is finish'd, with a good big pointed Stake (made of some hard Wood) or an Iron Crow or Pin made for the purpose; endeavour to pierce the *Clod* in several places of it, and pour Water in the holes gently from time to time, as long almost as it will imbibe any, and that you judge the whole Mass of Earth may sufficiently be soak'd with it.

Let us next proceed to fit our new *Cafe*, be it of the smaller, middle, or largest size: The Custom is, and tis a very good one, both for the benefit of the *Roots*, as for the preservation of the *Cafe's* bottom, to cover them with a Bed of Rubbish, old Brick-Bats, &c. that the frequent Waterings draining through those loose Materials, may not Stagnate and Corrupt, which would both Rot the *Roots*, and bottoms of the *Cafe's* also. I would have this Rubbish handfomly rang'd, pretty gross and thick, suitable to the bigness and capacity of the *Cafe*, yet not to lye above three or four Inches thick, the least siz'd Boxes two.

This done, 'tis sufficient to fill in as much prepar'd Earth as is requisite to set the *Clod* in, so as the Superficies be plac'd level with the brim of the *Cafe*, and then finish all, gently filling the void places at the sides, and give it all a plentiful Watering: So have you the true ordinary way of *Re-Casing* all sorts of Trees.

But, for as much as I perceive that by this manner of putting in the Mould, 'tis apt to sink, and settle too much after a little while, and consequently cause the *Roots* quickly to touch the bottoms of the *Cafe's*, which may extremely prejudice the

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Certain it is, that Earths which are light, and which (as they speak) have little or no Body and Consistence, coming to be Watered in any sort, will hardly retain sufficient Moisture for any time, as indeed they should: On the contrary, they quickly become dry, by reason of the easie passage which the Water finds, as well through the loose Mould, as through the very *Cases*, and so the Trees not finding their *Roots* sufficiently Refresh'd (of which they have now most need, to set them in motion) are subject to pine away and wither, unless they be plied with Water. In such kind of Earth therefore, 'tis indispensably necessary to repeat it; but, as 'tis only want of Moisture, which makes them dwindle thus, so those Earths which we have describ'd above, being of Consistence naturally to retain their Moisture, and continue Fresh, how little soever you *Water* them, will preserve the Trees from that Infirmary, and enable them to exert their Genuine Activity, in sending forth good *Roots*, and consequently fair *Shoots*, large and ample Leaves, and beautiful Flowers, &c. In a word, maintain themselves in perfect Health, without needing such abundant, and continual Waterings.

The Rules which I follow as to Waterings, concern first of all, that which is given immediately either after their being put into the *Green-House*, or at their bringing out. And secondly, those Refreshings which are given during all the time that *Orange-Trees* stand abroad, some of these Waterings I make to be great, others moderate: Those I call great, when pouring Water on the Earth, it drop out at the bottom of the *Case*, but so as it be very little or nothing; and such Waterings are profitable, provided one use them not too often. Those I call Moderate, which I cast on to Refresh the *Surface-Clod* only, and maintain the Moisture that has been consum'd, as well by the Heat, and Dryness of the Air, as by the Attraction of the *Roots*.

As for those Refreshings which are given immediately after they are set into the *Green-House*, I would bestow a plentiful one, so soon as the *Orange-Trees* are placed where they must stand during all the time of their Confinement; and that which Justifies it, is, The necessary Closing of the Mould about the *Roots*, which in Transporting, the shaking, and agitation of the Stem, may have separated both from it and the *Roots*, letting the Air into the void places, which would prove an invincible obstacle to their Action, which (as we have often noted) never move or thrive in any *Plant*, save when the *Roots*, and the moist Earth, immediately unite, which is effected by a good *Watering*, and prevents the disorder one is to apprehend, when a Tree is Disabl'd from Acting according to its Nature.

Having finish'd this great Refreshment of our Cloister'd *Orange-Trees*, I hardly give them any more, unless it be very sparingly at the entrance and expiration of *April*, when the Season growing mild, the Inclos'd Trees themselves become sensible of it; and then one should not fail of setting open the Doors and Windows of the *Green-House* often, so as the Heat of the Sun augmenting by degrees, its Beams, or the newly warmed Air at least, qualifying the Room, the Earth about the Trees becomes a little more thirsty, and being heated, urges the *Roots* to begin to *Shoot* and *Quicken* apace. I say, *Quicken* and *Augment* their Motion; for 'tis certain, (as I have elsewhere shew'd) *Orange-Trees*, as well as all other *Verdures*, are in perpetual Action, and that in the very *House*, else would both their Fruits, and Leaves infallibly drop off, as being only preserv'd, and fastned to them by Virtue of the *Sap*, which continually maintains, and gives them Nourishment, &c. 'Tis true indeed, these *Plants* do Act and Move less some time than in another; that is, more slowly in Winter than in Summer, when the Sun (which is the Parent of all things Living) favours them with his benign Influence: But excepting only this Month of *April*, I totally cease from *Watering* all the Winter long; and in this I say nothing New, all discreet *Gard'ners* observe it, and very rarely give I any Water at the beginning even of *May*, because its approaching so near the time of freeing the Trees from their long Confinement, I see no Necessity of making the *Cases* heavier by *Watering*, which one shall find weighty enough already, and sufficiently difficult to Transport.

By the way, I make no reckoning at all of certain *Casts* and *Sproutings*, which some *Orange-Trees* now and then push out during Winter; nor in truth are they good, as appears by the withering of their Tops, and falling of the Leaves; so as instead of its perswading me those Trees should be *Water'd*, that they may make better *Shoots*, I rather pull them quite off, as superfluous, and good for nothing, but unprofitably to avert the *Sap* from the other more substantial *Parts*, *Branches* and *Foliage*, which it should Augment and Fortifie.

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The Work I would have bestow'd about *Orange-Trees* whilst they are inclos'd, in order to their necessary Politeness, is to finish the making them clean from the Filth and Ordure, which the *Punaises* and *Bugs* have left behind, and that has not yet been well taken away; and that if any may here or there seem to wither, a little Water be given to it, but in very little quantity, since it proceeds only from some of the Superficial *Roots* that suffer, for the Water which was given upon their first Confinement, has doubtless Conserv'd the Body of the Tree, and bottom of the *Clod* sufficiently Moist: Since having not yet undergone any such scorching heats of the Sun as was able to dry them up, they can suffer no such excessive Thirst, and therefore a very small Refreshing will soon revive the drooping Leaves. As for those which stand found and vigorous in the *Green-House*, maintaining their Leaves fresh, large, upright and open, they are only to be look'd on and admir'd.

What I have said concerning *Watering* Confined *Orange-Trees*, is to be understood (and that with greater rigour and exactness) of the *Watering* of all Trees and Shrubs that are their Fellow-Prisoners; such as *Jessamines*, *Granads*, &c. the over-frequent Waterings spoiling their *Roots*, and injuring the Trees; and besides they Naturally are not so Active as *Orange*, *Lemon*, and *Myrtle-Trees*, these latter sort giving Indications for moist part, by the faint and pallid Complexion of the Leaves, when they stand in need of a little Refreshment.

I would moreover for all sorts of *Cas'd-Trees*, whether in the *House* or Abroad, that the upmost Earth should be always kept loose, and appear as if newly stirr'd; since besides, this slight motion yields a marvellous Relief and Succour, by facilitating the penetration of the Refreshments you give them, and shews very handsomely to the Eye, whilst the Chap'd, Cloven, and Crusty Surface is as unsightly, I would therefore have it also a little sprinkled.

We come now lastly to Waterings abroad out of the *Green-House*, as being in truth that which requires a great deal of Discretion, and in which methinks they commonly most fail.

As soon therefore as you bring forth your Trees, and have Rang'd them in the Stations where they are to continue, bestow upon them as plentiful a *Watering* as you were Advis'd to do when first you Hous'd them: I say, let this be a thorough and bountiful Refreshment; which to do effectually, make several holes in the Earth with some Iron-Pin, or Stake of hard Wood, but withal so cautiously, as not to gall any of the *Roots*: By this expedient the Water will visit every part of the *Clod* as 'tis necessary it should.

Besides this first plentiful *Watering*, I allow them also two considerable ones more every Week, so long as I see the Trees to Flower and Spring; namely in the Months of *May*, *June*, *July*, and consequently (if the Season prove very hot and dry) to *Mid-October*, when they are to be Hous'd, and which some Trees will themselves Advertise you of, by the crumpling, half closing, and hanging down of their flaccid Leaves, giving notice that they want Refreshment, as you'll also find if you thrust your Hand a little down into the Earth by its being dry. I would likewise every Ten days, or thereabouts, order them a considerable Refreshing, and sometimes a second moderate one, especially in *August* when commonly *Orange-Trees* make new Shoots, so as you do not repeat it in case the Mould be moist enough already, for 'tis not always the dryness of the Earth which causes the Leaves to wither, they faint oftentimes before a following Tempest, or that the Tree be not well Establish'd, is loose in the *Roots*, or too much expos'd to the Sun. In such cases you are ever to Examine of what Temper the Earth is, dry or moist, and accordingly to Govern the Waterings. Notwithstanding all this, every body finds that some sort of Trees will always look faint and sickly, whatever bountiful Waterings you bestow upon them.

'Tis very certain as to this particular, I have often observ'd two things: First, That when some *Gard'ners* have Command of Water, they are commonly apt to over Water their *Orange-Trees*, either themselves or by their Servants. And in the second place, Some extremely neglect to do it, and give them not sufficient, especially where it requires pains to fetch the Water, Laziness or ill Custom carrying them to these Extreams. 'Tis I say most certain, that as to the first of these two *Cases*, I would not they should exceed very moderate Refreshments, finding that they commonly give them too much: And to the second quite the contrary, namely, To allow them a thorough *Watering*, lest being to take pains to fetch the Water, they afford them not enough. I very well know that discreet *Gard'ners* need none of these Stepposite Documents; however, that I may Reconcile them both together

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ther, I adhere to my former Opinion, supposing the Earth to be mingled according to my Method ; That regularly *Watering* twice a Week, at certain times (namely during the hot Seasons, the time of Flowering, and pride of Shooting, and ever observing a Mediocrity between two great ones, and Refreshing them every eight or ten days only at other times) you will find your Trees in excellent condition as to their *Waterings* : To which add, That *Orange-Trees* have this of Agreeable as to what concerns their Drink, and in which they almost resemble Men that are Wife, That as they seldom call for it but when they have Need and are Thirsty ; to urge them when they do not require it, instead of doing them a kindness one does but incommode them. In like manner *Orange-Trees* sometimes of themselves give notice when they have need of being Refresh'd ; so as we certainly do them injury when we Water them out of Season, whereas we do them good in Refreshing them when their Leaves becoming lank, and wrapp'd together call for help, and give Symptoms that the *Root* is languishing for want of Moisture. But that which justifies the Comparison farther is, That a Prudent and Skillful *Gardner* is never to wait for the Signal from his *Orange-Tree* when he should do his Duty, but that when ever he perceives or suspects it (if he be not mistaken) he be sure to apply the proper Remedy according to our Prescription ; but as there are both good and wholesome Refreshments, there are likewise very evil and pernicious ones too. Concerning which I shall declare what I think, with that Moderation I judge most convenient.

## C H A P. IX.

*Of the Inconveniences which happen to Orange-Trees, as well from Over-Waterings as from the Fire which is made in Green-Houses.*

**T**HIS easily perceiv'd, that when too much Water is given *Cas'd Orange-Trees*, there usually ensue two great Disorders ; and as remarkable it is, that one is not sensible of the Evil when it first begins, but the consequence makes us feel it at last, when 'tis too late for Remedy.

The first Disorder consists in this, That those unreasonable and frequent Summer-*Watering* Accustoming (as one may say) the Trees to a Course of Life, which though Inconvenient, would nevertheless enable them to subsist, were it to be continued all the Winter long : Their being so easily injur'd to all sorts of Nourishment, would produce them this singular Advantage. But since we find that such *Waterings* will become Mortal to them when the cold Weather comes, we ought to be very sparing, though to avoid one danger (which in effect is of all other the greatest) we are apt to fall into another which is not without its great Inconvenience, namely, That of an every Years loss of Leaves. Now one cannot Reflect on an Accident so ungrateful, without concluding it to proceed from the *Roots* not receiving that due Nourishment during the seven previous Months of their Confinement, which they us'd to have the five former Months abroad, which needs must check and put a stop to their Natural Activity. This doubtless is the Cause that the Leaves finding themselves destitute of that perpetual supply of Sap which then they need, are forc'd to forsake the Branches, which Naturally and from their Birth produc'd them : And so not well understanding from what source this Evil proceeds we make divers Erroneous Conjectures, and have recourse to other things which peradventure have not at all Contributed to it, always supposing that the *Green-House* be not in fault.

In the next place (and which indeed is the most Important) since the Nature and Quality of the *Shoots* intirely depend upon the Quality of the *Roots*, and these particularly upon that of Nourishment. 'Tis certain, That when this is peccant and feeble, the New-born *Roots* must needs be weak and feeble also, and consequently, that the Sap which they prepare being of an ill Constitution, the *Shoots* themselves which they produce must needs be short and weak, also the Leaves small, limber, and often Yellow. Hence it comes to pass, that these *Orange-Trees*, which for want of sufficient Nourishment during Summer are already fall'n Sick, finish (as I may say) their Languishing and Misery, so soon as the Cold (which above all things they dread) assaunts them : The main Principle of their Natural Strength and Vigour, may possibly have enabled them to resist and struggle for some

some time against the Mischief to which their ill Culture has reduc'd them, but when once this little Stock comes to be spent and exhausted (as at length it will be) they pine so miserably, that for some years after one shall be hardly able to Recover them, and perhaps at last without Success.

We have already said (and may not improperly repeat here) that it is not from the Material Substance of the Earth the *Roots* Elaborate and Compose the Sap, administering Nourishment to all the parts of the Tree ; it is the Water only, which percolating through the Ground, is Impregnat with part of its Salt, or some other qualities wherewith the Earth was endowed : So as if this Earth, whose Salt doubtless is not Inexhaustible and without end, comes once to be over-diluted by great and frequent Waterings, it must needs at last be quite robb'd and depriv'd of all its Salure, and within a short time after, the *Roots* finding no more of it in the Water which moistens the Earth, or but very little, they can produce no more new *Shoots* worth any thing ; and consequently, neither any good and laudable Sap, Branch, Leaves, or Flowers, &c. as doubtless they would do in better Mould moderately moisten'd and refresh'd. Whence I conclude (and I think with Reason) That to Water Trees to the purpose, requires more Skill and Prudence than usually appears in the ordinary Conduct of most *Gardeners*.

On the other side, by the use of Fire which most of them affect to make in the *Green-House*, *Orange* and *Lemon-Trees* fall into other very pernicious Inconveniences as by long Experience I have Learn'd. The Reason is evident, The Fire is either too great or too small. If the latter, the Heat can only affect those *Plants* which are very near it, without any Influence on the farther distant. For Example, If you make it below, and (as commonly they practice it) in several places of the Room, neither the Heads (of any height) nor opposite sides of such as stand not near, are sensible of it ; and in case you make it higher, the under Branches receive no comfort by it. Thus granting it may do some good, which I don't believe, 'tis yet certain, that the Fire being little it does but little good, and in few places, and consequently its Benefit is inconsiderable, or rather none at all.

On the contrary, If you make a great Fire, as the Nature of such a Fire is to dry up that which is Moist, as far as its Heat extends, 'twill doubtless parch and dry both the Bark and Branches of the Trees, especially those parts on which the Leaves depend, and consequently make them shrink ; stop and obstruct the Channels and Passages of the Sap, which should always continue moist and open for its free and perpetual Intercourse, whilst (as above we said) 'tis indispensably requisite that the Sap do convey continual Supplies both to the Trunk, Branches, Fruit and Leaves, this disorder else will be sure to happen, upon the least Interception of this Supply : Sap, without question, being to these sort of Trees what Water is to Fishes, and the Air to all Terrestrial Animals, and even what Foundations are to Buildings, and the Hand is to the Ballance which holds it up, and suspends it in the Air.

In all Events this Fire (as Philosophers speak) Changes, and Dries the Air, and causes a notable Alteration, and has the same effect upon it as it commonly has on Water, which Experience tells us being Boil'd, and coming after to be expos'd to the fresh Air, grows more susceptible of Cold than 'twas before, and consequently shall sooner Freeze than that which has never been near any Fire at all : So as to the Impressions of Cold in relation to the Air, this Fire (kindled in the *Green-House*) renders the Air more obnoxious and dispos'd to receive the Cold which environs it on every part, than that which never was thus alter'd with any Artificial Heat. The Heat of Char coal, and the like, whether in some hidden Stove, or Earthen Pan, though it may perhaps encounter, and hinder some Effects of Cold offensive to living Creatures, who will receive no more than they need and have a mind to ; yet *Orange-Trees* have not that Gift to distinguish and know the just degree of a Foreign Heat, necessary to protect them against the rigour of Winter. The truth is, to derive any advantage from Artificial Fire in favour of the *Green-House*, one should first understand the just Measure of the Need which these Trees have of it, whether only to defend them from the Cold, or so to recover the Heat which they have lost, as that afterwards no Infirmary may be the consequent of it ; but we have not this Sagacity, an *Orange-Tree* which has once been attack'd by the Frost infallibly loses its Leaves, remaining Sick and Indispos'd a long time after. In the second place, it were necessary that through the whole extent of the *Green-House*, the Heat were always Uniform and of the same Temper, which it neither is nor can be, for it can neither be equal as to its continuance, nor (as Philosophers speak) perfectly Regular as to its Intention : That is (as all the World has sufficiently Experienc'd)

rieric'd) maintain a constant Heat, and of the self same Tenor, especially during the Night, which is the Time that the Cold is most Intense and Penetrating, and when the Gard'ner is commonly fast asleep; so as the Fire, which at the Beginning, or when newly kindled was but moderate, does afterwards Increase, the Fuel at last being all spent and consum'd, it does either extremely diminish and abate of its Heat, or is altogether extinguish'd: Such Fire, I affirm therefore creates great Disorders in the *Green-House*, Spoiling the *Boughs* that are nearest to it, Parching the *Leaves*, and above all, Altering the *Air*, which produces all the Good, and all the Mischief, accordingly as 'tis well or ill qualified.

My Opinion therefore is, that the very best Expedient for the Preservation of *Orange-Trees* thus Inclos'd against the Cold, which is so finelt and deadly to them, were (as we have shew'd) a good Situation and Exposure: That the Doors be made of sufficient Thickness, and exactly Shutting; The Windows very Clos'd, with good *Chassis* double, and well Caul'd; Especially, that the Walls of the House be Substantial. But in Case the *Conservatory* should not have purposely been built for this Purpose, as now and then it may happen; and that perhaps one is oblig'd to make use of a Room that has been formerly some Hall, Cellar, or Stable, &c. as occasion prompts till a Better be made. In such exigence; the best way is to build either within, or on the out-side (as shall be found most Convenient) some Counter-Wall, of a full foot in thickness, as high, and long as is the old Wall, if you suspect it not thick enough; and this should be built of good Masonry: Or in case of Necessity, one may Cloath an Old Wall with Litter of a dry Dung-hill, beating it very close together as you heap it up; and to the end it may stand and not slide down, to drive in some stout quarters of Wood at Competent distances from the Wall about four foot of each other, joyning to the Counter-mure of the Litter.

Indeed such Litter-Counter-Walls are not so sightly and sweet within Doors: Besides they will be a Retreat for *Rats* and *Mice*, which may be apt to gnaw and dis-bark the Trees, not sparing the Roots themselves: But besides that there are many remedies and ways to destroy most of those Vermin; They are not such deadly and pernicious Enemies to Trees which are Inclos'd, as the *Frosts* against which such Counter-Walls of Dung are made use of, 'till a more commodious House can be built: This therefore may serve to answer the Objection of Unfightsiness, and ill Odor. I wish no body (who is a Lover of *Orange-Trees*) may be reduc'd to this Extremity; but may have timely prevented it by erecting a good *Conservatory* for this purpose only.

But, if notwithstanding all these Precautions, we discover the Ice in our Inclosure, as 'tis easily done by hanging a Linnen Rag moistned, or setting some small Dishes of Water in several Places of the House in the *Winter*-time, and especially near the Doors and Windows, on the edges of the *Cases* and *Boxes*, to observe whether the *Frost* (against which one cannot be too Watchful and Jealous) have gotten any entrance: In this Exigence, the most Infallible Remedy to maintain a Sweet and uniform Warmth, and which may last as long as one pleases; is to Hang up lighted Flambeaux, or Lamps (which will be fire to last) either between the *Chassis* against the Windows, if it be there the Cold enters, or near the Doors, or all along the whole House; taking care the Flame touch none of the Trees, and that the Warmth continue of the same Temper, as is easily done: The Experience of setting a small Wax-Candle lighted in a *Coach* close shut up, or of more than one, in a very close Chamber, may serve to Confirm this Expedient, as they have me to justify this Imagination.

## CHAP. X.

What there is to be done to the Heads of *Orange-Trees*, as well in order to the Recovery of such as have been long Neglected, Ill Govern'd or Spoil'd, either by Cold, Wet, Hail; as also how to Attain the having such Trees as shall be always Beautiful, and Agreeable both in Shape, and Figure, Health, and Vigour.

TO satistie the Importance and Extent of this Comprehensive Chapter, I think first to propose the Idea which I have conceiv'd of the Beauty of the *Orange-Tree*; whether it be a Well-grown Tree, a Small, or Moderate one; for there are very fine ones both of the one and other sort, as well as among all the Species of Animals

Animals, there are fair ones of all Ages and Growths: But the Truth is, there is nothing more Rare, than to find *Orange-Trees*, such as are Great and Perfect at the same time; whilst it is easie enough among the ordinary and moderate sort, to meet with such as are both Fair, and extremely handom: There are also I confess, very beautiful *Orange-Trees* in *Bush* (that is, such as produce Branches from the very bottom) but indeed those which maintain an upright, strait and fair Stem of about two feet and an half, to Three or Four, or at most, to Five Feet in Height, are much statelier, and carry a certain Majesty, much Superior to the *Shrub* and *Bush*: I am not much for those whose Beam surpasses this Height; tho' they have otherwise their Beauties also, and really something in them of Noble and Royal; such as would Infinitely become a Plantation without Doors, and in plain Ground: But for the *Cafe* and *Box*, they would bring with them great Inconveniences, and be nothing so Commodious, in regard of the difficulty of Carrying and Removing them, the Height and Capacity of the Doors, and Cieling of the *Conservatory*, &c. A *Green-House* from Fifteen to Sixteen Feet, is an handson proportion for the well entertaining any Reasonable and Curious Person's Trees: But for such as have Houses of Twenty, Twenty two, and Twenty four feet high (as indeed there ought to be) for Trees of Eight, Nine, and Ten feet Stem or above, they ought to have Heads correspondent to their stature, and will require *Cases* of four and five feet Depth: But I confess these Figures affright me; there being I fear few Persons that would be at the Expence of such Buildings: And indeed hardly find we the Gates of Cities of that Altitude: However, they deserve due Praise and Encouragement, who in our Days attempt the Raising Trees of that goodly Stature, since we may hope, that as they appear Worthy the Curiosity of the greatest Monarch of the World, so we shall shortly see them an Extraordinary Ornament to his Gardens.

Now therefore to be able to pronounce that the Head of an *Orange-Tree* (whatever it be) is Endow'd with all the Beauty and Accomplishments 'tis capable of, these fix Conditions are requisite:

First, That the Head be of a Round Figure, yet so as it be also large, well-spread, and almost flat, approaching in Shape to that of a *Mushroom* newly risen, or of a *Calot*, yet not Affected or nicely Circular, as they use to cut *Myrtles*, *Trees*, *Phillyria's*, and *Standard-Hony-Suckles*, *Box*, &c. which appear forc'd and constrain'd, but of a Natural Roundness, Free and Airy, and without Art, as we commonly see grow the *Constantinople-Chefs-Nut*, *Lime-Trees*, &c.

Secondly, That it be Full, without Confusion within, and not void and hollow as we Affect to have our *Fruit-Trees*: But the *Orange-Trees* Heads should be furnish'd with a pretty number of fair well-fed Branches, almost of an equal size, and easie to be seen and numbred if one be dispos'd. This is one of the most principal Conditions of the Beauty of *Orange-Trees*, as it is also the most Rare, whilst many do not Esteem this Confusion for any great Defect, though I confess it appears to me a great one.

Thirdly, That the Branches which form and compose the Head of the Tree, be sufficiently and well Nourish'd, and so strong that their Tops instead of Inclining towards the Earth (as many we find do) erect and hold up their Heads to the Air, with plenty of large and green Leaves; yet so, as that the longest Branches exceed not half a Foot, since if the Boughs sink down, 'tis a mark they are so weak that they are not able to Redress themselves; and seeing the new *Shoots* spring only from the Extremities and Tops of the old ones (whose Situation they naturally follow) it comes to pass that all such *Shoots* as proceed from those feeble ones, are yet more feeble, and less able to erect themselves, and consequently yield a very ill-favour'd Prospect. Besides, If the Leaves be small and yellow, 'tis yet a sign of greater Imbecillity in the Roots (for as much as Naturally this Tree does produce Leaves that are large, green, thick and in plenty) and therefore that they will quickly fall off, and denude the Tree of its genuine Ornament. In short, the Reasons of this third Qualification propos'd, are, That if the utmost length be excessive (as a Foot or more would be) the Leaves not being of above three or four Years abiding on the Branch which bears them (and even for those a Tree ought to be a very lusty one, since most of those which we see seldom hang on above a Year or two, and live not beyond three or four) it happens, that coming to drop off in their turns, those over-long Branches will appear all naked and bare, which is extremely unfightly; therefore, whatever Branch in the Spring of the Year advances above half a Foot, it should be nipp'd off and confin'd to that dimension.

Fourthly,

*Fourthly*, The fourth condition requires that the Tree should be ready to put forth plenty of fair Shoots every Spring Yearly; which if it do not, or that it only produce but small and trifling ones, the defect is from the Foot, and the next Year after it will be in danger of losing its Leaf, which should be prevented by all means possible. Now no Shoots ought to be accounted fair, but such as are of competent length and bigness, and consequently (as we shew'd) able to sustain themselves without bending their Tops; such never fail of large and green Leaves, which they keep on from falling, since those which have now perhaps been on for three Years past, coming to drop according to the course of Nature, there is still a succession of those of the two former Years, besides those of the current and present Year, to maintain the Ornament and Decoration of the Tree.

*Fifthly*, 'Tis required that our *Orange-Tree* produce (not an Infinite, but) a Reasonable quantity of Flowers, fair, great, long, large and weighty, such as give preface of goodly Fruit: On which I am to Advise, That *Orange-Trees* do every Spring produce two sorts of Flowers, one whereof proceeding from the old Wood or Shoot of the precedent Year, usually are but small and round, and confus'dly plac'd, so as most of them drop off without knitting; and these first appear in the early Spring. But Woe to that Tree which is over-charg'd with them however the Owner esteem of it; their Beauty will soon pass, and the end of it be unprofitable and displeasing.

I foresee that my Sentiments herein will not be very Acceptable to every body, divers Curious Persons fancying that an *Orange-Tree* can never bring forth too many Flowers; but for all that, I adventure to declare it a great Mistake, which Time and Experience will Cure them of. I should willingly be of their Opinion, were it possible to Reconcile that large quantity of those sort of Flowers with those other Conditions, which indeed I esteem a great deal more, the Beauty of the Abundance of those being but for one Fortnight, whereas the other are the Beauty of the whole Year about, and therefore to be prefer'd.

The other Flowers of the *Orange-Tree* spring out at the tops of the Shoots of that Year, and commonly with those transcendent Qualities we have enumerated; nor come they in Clusters and confus'dly, but are of substance long, and well fed, and do not appear 'til the end of June, or beginning of July, and of which we cannot have too many.

The Sixth Requisite to the Beauty of the *Orange-Tree*, is its being free of all Ordure, Dust and Sullage, and especially of Bugs and Pismires. We have shew'd already how this may easily be compass'd at the beginning of this Treatise.

Having thus propos'd the Idea which I have form'd of a Beautiful-headed *Orange-Tree*, and especially supposing they have not fail'd in performing all the Directions I have given concerning the Root, in order to its Shooting well (upon which all the rest depends) there remains to inquire what there is more to be done to arrive at this Idea, whether in Relation to such Trees as have not yet begun their Heads, and are but newly in-Cas'd, or in Respect to others, which have never received any Assistance or (as one may say) Education at all.

And First, As to the roundness and fullness of the Head, I conceive that having well consider'd and approv'd of it, one shall easily discover the defects which are repugnant to it, so as one shall not endure so much as the sight of an *Orange-Tree* unfurnish'd in the middle, flat at one of the sides, over long on another, or rising in Pyramid like a Cypress, or with Branches groveling on the Earth like the tardy and late-bearing *Cherry-Tree*: You will not (I say) be able to suffer the least Bough to start out beyond its Fellows, disfiguring the roundness which is now a forming.

And so for the supply of Vacuities (which seldom is the Fault of *Orange-Trees*, that on the contrary grow Naturally full, confus'd and irregular, as do most sorts of other Fruit-Trees) one is to consider, that this defect either proceeds from no other Cause than from the Ignorance, and ill handling of the Gard'ner, or that some interior and middle Branches may unhappily, or unwarily have been broken. In either of these Cases, there's nothing to be done but to endeavour the preserving of those other Branches which Nature will not fail of putting forth if the Tree be vigorous; or if it be not in condition (whilst perhaps it is become Sick and Languishing) you must speedily resolve to Lop off, and Abate one or two of the biggest Branches near to the middle, being certain of its soon producing others, sufficient to furnish and repair this blemish in a little time.

As to a Tree defective in roundness, or that you find one of its sides too flat, it may proceed from a double Cause; as either from some Accident of a Boughs being

being broken, which should naturally have Contributed to that comely Figure, and then the remaining sound part of the Branch must of necessity be Cut off, as far as to that very place which the Discretion of an Able Gard'ner judges may best supply the Defect: Or else it springs from where an Ignorant Gard'ner may have suffer'd some one or more Libertine great Branches to shoot uncontroll'd, and to have Robb'd and receiv'd all the Nourishment from the Rest; whilst the most feeble parts remain as it were Abandon'd: whereas, he should have Nipp'd off those Exorbitants, at their very first appearing, and Reduc'd them to Order, or else have Cut them short the ensuing Spring.

Branches thus Nipp'd off, or discreetly Cut, would not have fail'd to sprout from all about the Tops several New Branches, and become a Round and handsome Tree: Nay for the Redress of such a Fault (a great one in my Opinion) one is sometimes forc'd to proceed to an Operation which at first appears a little Cruel; Namely, to the Amputation of all those Wanderers, and constrain the *Whole-Tree* to begin a new the forming of that agreeable Roundness, as shall be thought most Convenient, and which commonly reaches to that feeble part of the Tree: Or else one must begin upon the very Tops and Summit of those escaped Branches, provided there be any likelihood of bringing it to a Beautiful Shape, in which Case, one is to abandon all those small and Infirm ones that stand in the way.

If the Figure of an *Orange-Tree* be disagreeable by being too long sided; you have no more to do, than to Cut away, and abate all that part which grows out of due Rank, and stragles beyond its bound: The same is to be done to the Pointed, and over Tapering Trees, till you have reduc'd them to that Globular and desirable Figure a little flattened at the Crown.

But in Case that most of the Branches bend down their Tops, it proceeds from want of strength; else they all of them naturally sustain themselves upright, if of sufficient Substance to support the burden of the Leaves: Now this defect of vigour sometimes springs for want of wholesome Nourishment, and now and then from the Superfluous number of Branches, which require to be fed according to the vigour of the Root, be it Great, or Small; since its Strength can reach but a determin'd point: The Gard'ner therefore ought to be an Able, and Experienc'd Workman; First, in knowing how to apply good and proper Mould (of which the Chapter above has amply treated) and then (having done his Endeavour as to that particular) to Consider what Weight and Charge his Tree is able to sustain, and accordingly leave no more Branches on than can well be fed, and the *Stems* support.

When therefore one perceives a Tree to suffer under this Infirmary, the Branches Growing or over-bending (which happily may not yet proceed from want of Nourishment) one should begin to take a great part of those Branches quite away; Namely, all the feeble ones, and those especially which grow out of Order, and discompose the Figure; preserving only those Substantial ones which are found well plac'd.

This Operation should be perform'd with great diligence, just when the Trees begin to Sprout; and therefore one is to Observe, that commonly, as to *Orange-Trees* (for it does not fall out the same in most other Trees) from whatever part a Branch does Issue, be it from the Body of the Tree, or from some other Bough, 'tis ever accompanied with a Second, and not seldom with a Third; upon which this Reflection is to be made; That in case the Sap, which is divided into Two or Three Channels, were all reduc'd to One alone, namely to a single Branch; that one Branch partaking of the greater Portion, would doubtless be the most strong and vigorous, and capable of Erecting its Head, and Supporting all its Weight.

Now the Assembling and Uniting this divaricated Juice to one Channel, is soon learn'd and done, by pulling off the small Shoots, and notably diminishing of their number, not leaving above one in a place, Namely, the handiomest, and most Commodious, in order to the desired Figure propos'd. This pulling off the Shoots should be done as soon as possible, that the Sap spend not itself unprofitably amongst the Faulty Branches to be taken away; but finding its accustomed passage not only stopp'd and intercepted, but another (which is near it) open, may flow in plentifully there, and render it a considerable increase of Nourishment, and as Certain of Success, as the Execution of it is Easie.

'Tis sufficiently Evident, that it were much better not to have above one single good and substantial *Shoot*, than two or three moderate ones; One strong, vigorous, and consequently most Beautiful *Shoot*, shall furnish infinitely beyond all those trifling ones which can produce but poor and despicable *Foliage*.

It often fortunes, that such a Branch, so Nourish'd with the portion of three or four, will in a short time become of great length, and much exceed its Neighbours, to the ruin of our Propos'd *Symmetrie*: Wherefore, in this Case, 'tis advisable to Nip it off, and not permit it to exceed a Foot in length. To which Standard and Size, I would willingly Reduce the *Shoots* of all our *Orange-Trees*, that by this means, their Heads growing at least a Foot large in Diameter every Year (never above) that is half a Foot on each part or side round the *Stem* (I do not mean to Restrain its growing more in height, half a Foot shall suffice me) One may be Contented with this Annual Augmentation for the Diameter; since it fairly promises an Increase of Six Feet, in Six or Seven Years, which is very Considerable if one be able to attain it, as I doubt not but the *Orangist* will Accomplish doing his Duty as he should, or the Fault is in the *Gard'ner*.

Now in Case that all you thus Nip off, soon after produce new *Shoots*, and that in reasonable number, well plac'd, for the equally furnishing the whole Circumference of your *Orange-Tree*; 'Tis happy for you, and should be Cherish'd, since it does not often happen: And therefore if there be but few Branches, that having been so Nip'd put forth new *Shoots* at their Tops, you should spare none of them but such as may Contribute to the Beauty of the Figure; continually plucking off all the Springs of the rest: Which if the Lazy or Unskilful *Gard'ner* have omitted to do, and what else has lately been directed him, and was to have been done in *Summer* (when those *Shoots* being extremely Tender and Brittle, knap off easier than Glaz) You must have recourse to the *Knife* again, and fall to Cutting when they are now grown Hard, either at the end of *Summer*, before you shut them up in the *Green-House* (which is best) or at the *Spring* of the Year, when you bring them forth: For absolutely, you must not Indulge any one Branch that grows Extravagantly, disgracing the Shape and comely Figure which one should always bear in Mind and aim at.

The Pruning and Cutting of *Orange-Trees* has an advantage, which other *Trees* have not, Particularly *Peach-Trees*: It often happening that a Branch of the *Peach* being cut off, does not sprout at all again, hindered by a certain *Gum* that kills it: But of the *Orange-Tree*, whatever Branch you cut, or pinch off, if it be a Vigorous Tree, small or great, it will not fail of re-producing new ones, according to the strength and ability of the Tree.

As to Nipping of the *Orange-Tree*; you should never permit any new, long and straggling Branch upon them, excepting on such as have been newly Planted, and that yet have nothing to shew but the *Stem* only, without any old Branches: 'Tis necessary that those sort of *Trees* should speedily put forth good and lusty *Shoots*, and such as being free and without intanglement, may form an Head proportionable to the bigness and stature of the *Stem*; which they would not do, but on the Contrary, produce some confused slight ones, if according to the Rules formerly Establish'd, the vigorous *Shoots* were not pinch'd off short.

The *Summer Solstice* is the proper Season when *Orange-Trees* make their strongest and most vigorous *Shoot*, Namely the Month of *June*; and 'tis then one should be most Industrious in Nipping, and taking off the false *Shoots*, and Watering them more than at other times; That is, once or twice a Week, thereby to Affirm them in this first and greatest Action, and to promote the continuance of it, which sometimes they Redouble considerably towards the end of *July*, and beginning of *August*: And therefore the same care is to be taken in *June*. But if this exuberance of Second pulbing, do not appear till towards the expiration of *August*, or commencement of *September*, they are worth little: The *Shoots* of that Season will perish in the *Green-House* for want of time to perfect them; and therefore it were best to take them off as soon as they peep; That the *Sap* which gave them being, may continue in the bodies of the Branches that bare them, and make them the stronger.

So soon as you perceive any lusty Branch left upon a Tree *Re-Cas'd*, that has made no *Shoot* in any part of it, excepting perhaps, a some few small yellowish and trifling ones, instead of strong and lusty ones; such as was expected to break out from the extremities of those Branches, and should have serv'd to Shape the Tree: Cut them away without any scruple, even during the Pride of their *Sap*. Those

Those which you leave will prosper much the better.

I am also bold to affirm, That 'tis impossible to have an *Orange-Tree* answerable to the Idea which I have conceiv'd; unless you take off those early *Shoots* so soon as ever they first begin to pulb; and especially from those *Trees* which have not as yet attain'd that goodly Head which becomes them: Those *Trees* which are left with these smaller *Shoots* on them without this discharge, or that it be not finish'd, before the Flowers are past, may indeed produce more Flowers, but never come to be Beautiful *Trees*.

The first of these are most to be Condemn'd; forasmuch as all the Branches of those *Trees* abound with Knots and Bunches, and consequently are full of *Bugs*, producing none save a few pitiful Flowers: The others discover themselves soon enough (as well as the first) to see themselves stripp'd of theirs, whilst they suffer'd a part of the Nourishment to go into, and feed those Branches which are to be taken away, instead of managing it for those which are to be preserv'd, and would become much fairer, strong, and well furnish'd with goodly Flowers, and spreading Leaves.

This pinching off the idle *Shoots*, does not only Contribute to the Rounding, Filling, and extending of the Head of an *Orange-Tree*, but likewise gives it all those other graces and perfections 'tis capable of; It produces fairer and stouter *Shoots*, strong and able to sustain themselves; adorns it with plentiful Leaves, ample and lovely Green; and enables the Tree to put forth abundance of new *Shoots* every *Spring*, and afterward to produce a sufficient quantity of goodly Fruit; and lastly, hinders the increase of those numerous Swarms of *Bugs* and *ants* you see crawling on the Heads of those *Trees*, so extremely Bunch'd, and full of Tufted Leaves, and consequently preserves them in that Neateness and Beauty which is so Charming.

If therefore (always supposing a Commodious *Green-House*) a little Care and Industry inable one to maintain our *Trees* in this excellent plight, of Shape, Beauty, Strength and Soundness: Is't not evident, that it is no such hard and difficult matter, to know what is first to be done to Recover, and establish those which happily are deficient in nothing but their Shape and Figure; being otherwise Vigorous and Lusty *Trees*; as also such as are of Shape and Figure beautiful enough; but wanting strength and health: and lastly, to Recover those, which labouring under both these Defects together, languish and are ready to Perish?

Generally, The great disorder of *Orange-Trees* happen to them from these four different Causes: First, from the *In-Casting*, which peradventure was not carefully done, or with improper *Mould*; or for want of Renewing in due time. Secondly, from some defect in the *Green-House*, its being over-Heated with Fire; or from the Cold or too much Moisture. Thirdly, it may proceed from Without, as by *Hail*, Impetuous *Winds*, or some other unforeseen Accident. And lastly, from their being ill and unskilfully Prun'd and Cut, or perhaps too unmercifully: Also from over-Watering without necessity, or neglect of due Refreshment during the Months of *May*, *June*, and *July*. These are in my Opinion the principle Causes of *Orange-Trees* being reduc'd many times to a miserable Condition.

That which many *Gard'ners* are so afraid of, and does not a little trouble them, is, That to Remedy these Defects, they are often necessitated to have recourse to the Severity of Abating and Cutting off both the Head and Foot of their *Trees*: Which Operation, very few have the skill in these matters, are capable of, and all the World are ready to Condemn at first sight, how well soever it be perform'd: But however, we hope, the Curious, truly knowing and Experienc'd will Approve of it, and are certain that the Success will Justifie it, though it indeed require some time.

To Commence first with the Roots of a Sick *Orange*, or *Lemon-Tree* if it has long been *Cas'd*, so as one may reasonably suspect that the Roots are come to Touch the bottom of the *Box*, and so to receive no Nourishment there: One is then to Resolve without more ado to take it quite out of the *Cafe*, and Abate two third parts of the *Clod*, and withall to examine whether the *Mould* of the *Clod* be not too Light; and if so, to Water it sufficiently for three or four Hours before you lift it out; Thus the Earth being well drench'd, the Roots may adhere the faster to it, and you with more ease and assurance take away what you judge Convenient.

This is not to be done where you find the *Earth* so light, excessive dry, and exhausted as to fall, and crumble away at every touch more than it should: But in case it be sufficiently tenacious and consistent to hold, spare the Pains of the Watering we speak of in *New Casting*. If the *Trees* have not been *Cas'd* above a Year

or Two, and have perhaps been planted too deep and low: You should then examine in what Temper the Earth is; as whether too strong or over light: If the latter; you must give them an half *Re-Casing*; That is, supply them with as much well prepared, and better condition'd *Mould* as you can, and be careful in the mean time that you neither shake the Tree, or lay bare its Roots, which would be very prejudicial. But if you find the Earth to be over Grofs and Stiff, or not sufficient, I hold your best course is to *Uncase* it quite, and to abate part of the *Clod* after 'tis well sob'd and Moistned, and to replace and set it in again, as already we have taught; since in truth, all that can be done about the Head, will be of small Advantage, unless you begin first to secure the Foot, which is the Basis and Foundation of all, and the sole Architect able to Preserve both Head and All the rest.

Having thus perform'd what is due to the Foot, your next work must be about the Head again, and make account that what you'll most Regret, are the Extremities and Tops of the Branches, to which hardly any Nourishment for a long time has been able to arrive, and accordingly, you'll find them Chang'd and Dry'd exceedingly, either by reason of the diminution of the *Sap* it self in the Roots, or that the Head and Branches are charg'd beyond what the Foot is able to Support: Not unlike those Fountains, which cannot Rise to their accustomed height, either from the failure of the Spring or Source, or that the Waters are too much divided and have taken some other Course. In this Exigent, you must not only pluck away, and cut off the Tops of those Branches, but do it to the purpose, since your own Reason will tell you, that having Treated the Foot as a Sick and Crazy Member, you should not charge it with a greater Burden than it can bear. Now supposing the Tree to be in a languishing Condition (as by its Root appears) and that you have been oblig'd to retrench a considerable part of it: That is, That a great many of those Agents, which wrought and endeavour'd to Maintain the whole Tree, be extremely diminish'd by these great Abatements and Amputations of the Roots, (although for the good and benefit of all) You must resolve to do as much proportionably, by diminishing of the Head.

Moreover, as you expect your Tree should likely put forth new Branches at the Tops of the old ones which you have shortn'd: You should carry such an *Idea* in your Mind of the Shape and Beauty you would bring it to, that no more new Branches succeed in any place, than what may serve and contribute to that conceived *Idea*.

Now according to this *Idea* one ought to be as Discreet as Bold: Discreet, to Cut and Prune off no more than is necessary; Bold, to spare no unprofitable Branches. In a word, one should be Compleat Master of the Operation, and proceed Courageously and without hesitation: He shall else work with a Trembling Hand, in fear of being blam'd for having been too free with his *Knife*, and cut too much; and by this means falling into the common and contrary Error of not Cutting enough at first, be at last reduc'd to a necessity of still Cutting more for two or three Years successively, by which a great deal of Time's lost that one shall afterwards repent of.

Not but that however Skillful and dextrous one be in Pruning, one shall now and then find some Tops of cut Branches to die without putting forth any Shoots at all, especially among the Sick and long diseas'd Trees; so as one shall be forc'd to cut them again lower, and that immediately as soon as ever one finds that there's nothing to be hop'd for or expected, as you'll know by a *Dryness*, accompanied with a certain *Blackness*, or some *Clifts*, and then you'll never be in danger of Re-proach for having abated too much.

For in fine, altho' in such like *Re-Casing* of Trees one ought to Cut a great deal, yet should one also be exceedingly Cautious in sparing what ought to be preserv'd; Especially among the greater Branches: The small ones are not of the same Consequence; though by reason of a shew they make of some remaining Leaves, they appear indeed as if they were of some Consideration: On the Contrary, one should not at all pity or spare 'em upon that account; for you'll find them quickly drop off after the *New Casing*, without advancing a jot the more for your Indulgence.

But if you have been afraid to Cut these small trifling Branches when you new *Cas'd* your Tree, be sure to do it to the purpose, so soon as the Leaves forsake them; Nay, though you should find some pretty likely Shoots upon them, since you are to reckon none for fair Shoots, but those which are great and strong ones, and that sprouting from some good part of the Tree, Branch, or Stem, may contribute to the Beauty of its Shape: As for those which you find upon the weak and feeble

Branches

Branches of the Years before, they are to be looked on but as false Money, which makes a fair shew indeed, and nothing else.

I must here acquaint you, that it is not with *Orange-Trees*, as with other Trees which come from the *Kernel* or *Stone*, as to what concerns all sorts of Branches: For Instance, Those great Boughs which we call *False Wood*, are commonly pernicious and hurtful to *Fruit-Trees*. Indeed, on whatever part we find them to grow, we ought instantly to make War against them, and Cut them off, as very tedious producing Fruit, which is the thing we principally seek from those Trees, and therefore Spare and Cherish with great Care the small and feeble Branches: But as to the *Orange-Trees*, the chief thing we affect, is to have them of a beautiful and elegant Shape, that they appear full of Vigour, as well by their *Leaves* as the *Shoots* they make, without being much concerned about the *Flowers*, which commonly they are furnish'd with in too great quantity: Hence it is, that we save and spare all the great and substantial Branches we can, even those which in our *Fruit-Trees* they call *Water-Bowls*, or *False Wood*; provided that both the one and the other be well plac'd: In effect, they are those only which are able to put out others as fair, and as many as we have need of, and consequently to produce large and ample Leaves, and as fair and goodly *Flowers* as one would desire.

It will not be amiss here, that for the Consolation of the Curious, I give them notice that the first Shoots which push out at the Tops of the old Branches of those Trees that have been *Re-Cas'd* whilst they were Sick: I say, That these new Shoots, far from being found and strong, are themselves very Sick and near their end. But let not this trouble you, they commonly resemble Water that first runs through the Pipe of a Fountain newly made, which comes foul and dirty, as bringing along with it the filth and sullage of the Ground and Place it passes through; neither is the Pipe clean at first 'til it cleans it self, the pure new Water of the Source, assisted by the Wind, chafes the filth before it; after which it continues to run perfectly clear. In like manner the Shoots of an *Orange-Tree* that are Sick, are Yellowish and Languid, because its Branches retain nothing in them save the Dregs, and small remainder of a Morbific and Tainted Sap, rising from the long Disease'd and Infect'd Roots; and therefore you cannot reasonably expect that such a Tree should make any new, strong and vigorous Shoots, large and Verdant Leaves, 'til it produce new and sound Roots, by having the old ones cut away, and an application of new and sound Earth at its *Re-Casing*, with good Government and Culture. 'Tis observable, that what proceeds even from the fairest new Roots, come ordinarily at the foot, and underneath the first yellow sick ones; and which from the sole Effort of the Rarefaction of the Spring, have been immediately produc'd independently from the new Roots. But these last Shoots which come out below these, near the Body of the Tree, proceed from the Operation of the new Roots, which acting their part in their fresh and new good Earth (given them at their *Re-Casing*) prepare good and wholesome Sap, and consequently produce fair and goodly Shoots.

Now such newly *Re-Cas'd* Trees, are sometimes a great many years e'r they produce any thing, so as one may fitly compare them to some Animals, that having lived a long time upon unwholsum Food, find it very difficult to Recover when they come to that which is better; and it seems as the Stomach, Muscles, Bowels &c. of these Creatures are shrunk up by Famine and Want: So the Skin which Clothes and Invests the Stems and Roots (the Seat of the Principle of the Life of *Orange-Trees*) grows hard, and by this means, the Heat which should Revive, Excite and Animate this Vital Spring, which puts all into Action (and Animates and Awakens the old Roots to begin to Act a new) is not able to reach them, and to Rarefie the old torpent and sluggish Sap, and Mollifie the dry Bark, for the passage of the new Roots to which it should give Birth.

But albeit such newly *Cas'd* Trees remain a long time without Action, as being in a manner quite Stupified, one is not yet quite to despair of them, so long as there's any appearance of Green in them, for I have known some of them three or four years without putting forth so much as one Shoot, and yet afterwards do Miracles.

Most sort of Trees regularly do sooner put forth new Shoots than new Root (as we have shew'd in our Treatise of *Plants*) but *Orange* and *Fig-Trees* Spring sooner at the Root than in the Branches, and in more abundance. One may know as to both these effects, that when they grow in the Roots, they produce new Shoots, of which if any dye after they have begun to Shoot, 'tis a sign that the new Root does also perish, tho' it seldom happens.

Tis

'Tis likewise to be remembered, that if upon the old Branches of the Trees we speak of, new ones spring out in several places, and the fairest of them push in those parts that are nearest the Body of the Tree, one should bring them as near one another as is possible, and abandoning all the rest, follow and promote this Natural Vigour wheresoever it shews it self.

I suppose it is not at all necessary to Advertise you to cover over the Wounds and Scars of the Amputations you have made in those strong bigger Branches or Stems, with Wax which is prepar'd; this one never fails of, and Careful Gard'ners are diligent to observe it: I wish they were as Industrious in the rest of what belongs to the Culture of Orange-Trees. This prepar'd Wax protects the Wound against the Heat and Ardour of the Sun, and is Compos'd of a very small quantity of Oil mingled with new Yellow Bees-Wax, melted and brought to such a temper as makes it easie to be handled and spread. The Apothecaries (at Paris) commonly sell it ready made, and for the better show, Colour it with some cheap Red, Green or Blue, &c. which is more than needs.

Having thus said all that I think needful concerning the Re-Casting of Sick Orange-Trees, it remains to give some Directions about those, that being found and strong, may have been batter'd and spoil'd by Hail and Winds, or other unexpected Accident: But this operation is nothing so terrible and severe as what we have Describ'd a little while ago, the greatest mischief happening commonly among the Leaves, which the Hail may have jagg'd and mangled, whilst the Roots (which are the most Important) suffer nothing which obliges one to New Cast them. On this Accident one needs only to Strip the Leaves off, and if any Shoot be broken or bruist, to Cut it off beneath the place; and in case one finds that one side is more broken than the other (which may Disfigure the Tree) spare not to Cut, and Trim the other unhurt side as much, for it being a vigorous Tree (as is to be suppos'd) you will quickly see it Recover: But if it be a Sick and Languishing Tree, the Mischance will prompt one the sooner to Re-Cast it. So as if it have suffer'd by the Hail towards the end of May, or beginning of June (which is ordinarily the most dangerous Season) one should go about it immediately with a considerable Retrenchment of Branches, but if the Hail have spar'd it 'till the end of July, 'twill be sufficient to Prune, and Cut off those Leaves and Branches that have been so spoil'd.

## C H A P. XI.

*Directions for the Carrying and Transporting of Orange-Trees, and how to place them when they are brought out of the Green-House, and at what Season best: What is to be done both at their carrying in and bringing out, and whilst they are shut up. Lastly, Of the Ornament they will afford whilst they stand in the Green-House.*

THE Title of this Chapter is not so long, as the Matter and Subject of it will be succinct and short: Not but that one might perplex it with some Impertinent difficulties; As whether I should first begin to speak of what were to be done at the Bringing out the Orange-Tree, or at their Carrying into the Green-House. Since the Bringing of them out, supposes they first were Carried in; and their being Carried in, that whether one had them by Succession, or New Purchase and Acquisition, they already had been fer Abroad, and afterwards brought In: Something like that Probleme, whether were First, the Egg or the Chick? But as I conceive the Point is of no very great Importance, I shall leave it to the Decision of those who are at Leisure, and would make themselves Merry.

Returning then to my Subject and supposing, that as to the Removing and Transporting Cases and Boxes of the Middle and smaller Size, every body knows 'tis done by Wheel-Burrows, or strong Cowl-Staves, which with good Hocks take hold on the Bottom of the Cases at both sides, or else with Ropes put about the four Feet, to carry the Great Trees, to place them on low Trucks by the help of Levers, and so draw them along, either by the labour of Men or Horses to the Stations appointed for them. This suppos'd, I say to the other part of my Contents; That as these Trees affect Warmth, and as from Mid-May (when we bring them forth) to Mid-October (when we shut them up) which is the whole time of their Exposure, they do well enough in what place soever you set them, provided they enjoy the Sun,

at

at least a good part of the day: So they are most happily plac'd if near a Wall, Wood, or Grove to protect them from the North. Besides, this Situation being from the end of August to the time of carrying into the Green-House, is of all the rest most convenient for them, as defending them from the South and Western Winds, which about that Season blow, and commonly disorder and exceedingly ruffle our In-Card Trees: So as if one had the Convenience, it were to be wish'd, that after they had been expos'd to the East or South, during the Months of May, June, July and August (which in effect, are the most favourable Situations for them at first bringing out of the Green-House) You might afterwards expose them to the North till Mid-October, when it is time to carry them in. The exposing them to the East and South, Screens the Orange-Trees from the North Winds, which are Cold, and especially from the North-West that blow most in May, and are not seldom without White Frosts enough to spoil them.

As to the Time of Carrying in, and Bringing out these Trees, every body knows that as they dread nothing so much as Cold, they are to be protected from that, where-ever it Invades and threatens them. Now the Nights seldom fail of being Cold and dangerous till about the Full Moon of April, or towards the Eighth, Tenth, or Twelfth of May, when you may boldly bring them forth: Especially if there be any appearance of Rain during that Full-Moon: But if on the Contrary, the Sharp and Cold Winds continue, have patience a while, till the Weather come to be more favourable.

Again, the Nights begin to be Cold near the fifteenth of October, which is your just time of Retiring them into the Green-House, or at least to bring them so near it, that in case the Season prove very fair, you may suspend the carrying them in for a few days; for as long as you find the Weather at all Inviting, it does the Orange-Trees good to enjoy the fresh Air; Especially those, whose Shoots grow still in Length: But as soon as ever the Wind Changing menaces Cold, hasten them to Covert as speedily as conveniently you can.

I have been particularly Cautious at the beginning of May, not to bring them forth (as I noted) till the Full Moon of April be past; because commonly we are till then in danger of Frosts: And I take care that the Air begins to be very Agreeable and Temperate, especially if there be shew of a warm and gentle Shower, which if it happen, I often resolve to bring them forth before Mid-May.

This is certain, that however some Orange-Trees give Signs, and seem (as one may say) impatient to be at Liberty, by the Shoots they begin to put out in the Green-House, and would undoubtedly be much better abroad in the Sweet and more benigne Air, than in that which has been pent up, and is Colder by reason of so long absence of the Sun. Yet since the Frost but of one single Night, may extremely prejudice them, parch many of their Leaves, and ruin the Tops of the tender new Shoots; I persuade you to have a very special Regard to the Temper and Inclination of the Season, and that rather than Hazard them, to defer their Exposure, though it be a little late, than at all too soon. In a favourable Year, Warm, and Showery one may do well to bring them sooner out: But in a Dry, Cold, and Windy Year be not over-hasty of Exposing them, and even in Places that are low, you had need yet to be more scrupulous, than in the higher and more Elevated: Because commonly, the free Air, and the small Breezes spiring there, the Frosts are less to be apprehended.

Now as a kind and gentle Shower were to be desired at the time of their bringing forth; above all, that their Leaves might be Wash'd and Cleans'd from the dust contracted in the House: For the same Reason, one should be glad of such another Shower a little before we carry them in to cleanse them of the Dust gotten on them Abroad. But not that I Counsel you to Retire them whilst it actually Rains, lest the Sob'd Leaves, shut up wet, should soon become foul and squalid again, by the Dust settling on them there: However you must Remember to give them one plentiful Watering, so soon as you have Rang'd and Plac'd them in the House, as was directed you in the Eighth Chapter, wherein we have copiously spoken of Refreshments to be applied whilst Abroad.

'Tis not very necessary to Repeat here, That as great Care is to be taken to prevent the Cold from piercing into the Green-House: So nor should there be less, for the duly opening the Windows when the Sun shines; and the preserving them likewise from Rats and Mice: But of this also, we have spoken in the Chapter of the Qualifications of a good Green-House.

There

There only now Remains to Caution, That there be some space left between the *Green-House* Walk and the *Cafes*; as well to keep their Branches from touching the Walls and being spoil'd, as for commodiously passing to Visit and Water the Trees from time to time if occasion be: Moreover, that if your *Green-House* be a very ample one, so as to contain a double Rank of Trees, Ornamentally and with Symmetry all your other Plants (so as to leave an Alley in the middle, and enjoy a graceful Walk between them) it will be worth your Consideration how to do it, so as to Embellish the Place with several other *Vases*, and Pots of Flowers of the Season, by placing them about them, or plunging them in the Ground, which would grace and become the Front of the Door, by setting the lesser Trees and Shrubs above the Greater, and by Raising also the Greater on Blocks as on so many *Piedestals*, so as to hide the Naked Walls (and the Blocks themselves too) with Pots and little Boxes: Thus will the Room appear full and abundantly Furnished: The *Lemons*, *Limes*, *Jessamines*, *Myrtles*, *Laurel Trees*, *Lemises* and some *Cherry-Laurels*, and a World of other *Simples* properly enter into the Ornament, and the variety of *Foliage* Rejoyses and Recreates one marvellously. But for the *Pome-Granate* and *Rose-Laurel-Trees* (loosing their Leaves so soon) they are not at all agreeable, as neither are the small Sharp-pointed gray Leaves of that other Shrub, which disparage our *Orange-Trees*, and disgrace the rest of the verdant *Theatre*.

I would likewise if Possible, that in bringing them Abroad, which were so well ranged within, they should be set and dispos'd in as graceful a Figure without, for the Decoration of the Place they are to *Summer* in; and above all, if it might be so Martial'd as agreeably to surprize the Eye, by making them appear in greater number than they really are: And now I think there has enough been said, concerning *Orange-Trees*, their Flowers, Leaves, and Shoots; Let us now speak a Word or two of the Fruits, such as are desirable; and how long they should hang upon the Trees and when to Gather them off?

## C H A P. XII.

## Of the Fruits of Orange and Lemon Trees.

ALL *Oranges* are either Sweet, Eger, or Sharp-sweet; that is participating of both: The Sharp are for Sauces; the other to be eaten Raw like other Fruits. Of the first Form are the *Sweetish* or *Flats* (as some call them) not at all pleasant, and therefore one should avoid having any of them, if one may chuse: The best of the *Sweet Oranges* are those of *Portugal*, and another of a great kind, with a fine thin Rind, which are brought from the *Indies*. The small *China-Oranges* are also very agreeable. Of the *Class* of *Sharp Oranges*, the *Bigarade* are the Best, the Fairest and most Considerable. Those which they call *Rich-depouille*, and the Common *Orange-Tree*, whether Grafted or Wild are all likewise Good.

There are *Orange-Trees* that bear Fruit with extraordinary gross and thick Rinds, which have but very little Juice, and others, whose Skin is horny and knobb'd, as are the *Bigarades*: And lastly, some which are endued with a Sweet, thin and delicate Rind.

Those goodly *Oranges* which one should leave to knit, are such as you find to grow on the Tops of the *Shoots* of that Year, and that are in Flower at the end of *June*, or *Mid-July*: The rest that spring from the *Shoots* of the Year before, as being Subject to drop, and fall off without coming to maturity, one would reserve but few of.

One ought seldom to leave Two together on the Top of the same Twig, lest they hinder one anothers growth, being all apt to break the *Shoots* on which they depend.

Such *Oranges* as knit in *June* and *July*, are seldom fit to be Gathered till fourteen or fifteen Months after, when they begin to turn Yellow.

The very Leaves of that they call *Cedrat Orange-Tree*, have the same Taste with the Fruit it self, and are proper to make *Limonades*.

Among the *Lemon-Trees* and *Limes*, there are of different Sweetnesses and Tartnesses, as well as among the *Orange-Trees*: So is there likewise among the *Pomegranates*.

## C H A P.

## C H A P. XIII.

## Of Orange and Lemon Trees Planted Abroad in the open Ground.

SINCE it is certain that *Orange* and *Lemon-Trees* do Naturally grow Abroad in the open Field and plain Earth in Warm and Temperate Countries; and that it is by Art alone we Raise and bring them up in *Pots* and *Cases* in Climates obnoxious to severe Winters: It needs must follow, That these kind of Trees are more disposed to Thrive in the First way of *Culture*, and where their *Roots* have free scope and Liberty to receive abundance of Nourishment on every side, than by the Second and Artificial Way; where the same *Roots* being Reduc'd to a Narrow Compas, Imprison'd as it were, and Surrounded with *Air* capable of spoiling them, attain it but in very small proportion.

In the *Planting* therefore and *Cultivation* of these Trees, there's no more Mystery, than in *Planting* of other *Fruit-Trees*: All the Trouble and Difficulty is, how to protect and secure them with *Coverings* during *Winter*; which, besides their being well and substantially made, and so thick as the Cold cannot penetrate them, are capable of being very Ornamental on the out side if well understood, and that such as are Able, Curious and Discerning, take care and have the disposing of them: That which we every Year see, and so much admire at *Versailles* in the Gardens of *Trinon*, may serve for Instance, and Instruction to those who are able to Imitate it.

## End of the Treatise of Orange-Trees.

A

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REFLE



# REFLECTIONS

## Upon some Parts of

# AGRICULTURE.

### The INTRODUCTION.

**T**HE same Curiosity which made me take Notice of those usual Faults in Gard'ning I have already Discour'd of, and Endeavour'd to Correct, has frequently put me upon making Observations upon Plants, and Engaged me in some Natural Disquisitions. And now having Reduced those Particular Remarks, and General Considerations, which were both the First Ground, and the main Proof of what I here Advance into the Form of a Treatise, under the Title of *Reflections*, I think it my Duty to Communicate them to the World.

'Tis like they may not Relish well with some of our New Philosophers: And indeed it were an Extravagant Pretence to Plead every Body. However it is possible that among so many great Wits in this our Enlighten'd Age, there may be some that may observe something in them worth their Notice, and thence take occasion to push on their own Enquiries to greater Attainments, than a Person of my weak Abilities can Pretend to ; for having carefully Employ'd so many Years in making such Observations upon the ordinary Productions of Nature, as might be some ways Serviceable to Perfect the Art of Gard'ning, I can hardly think so very ill of my own Endeavours, as that they should be despis'd by every Body as Useless and Insignificant, and that at least my good Intentions should be so Unhappy, as not to meet with some few that may Approve of them. They will however, I presume, Accept of this Franc and Ingenious Account of my Observations, and Pardon the weakness of my Judgment and Reasonings thereupon. And with this I shall be very well satisfied.

I will therefore begin with an Account of what stirr'd up my Curiosity, and first put me upon making these Reflections.

E 2

CHAP.

## C H A P. I.

*Reflections upon the Different Condition wherein Fruit-Trees appear in those two different Seasons of the Year, Autumn and Spring.*

**I**F you look upon Fruit-Trees in the latter end of *Autumn*, when they are dispoiled of the Ornaments of their Fruits and Leaves, and when there appears no sign of Life in them, as also upon such as are newly Planted, you wou'd take them for dead Trunks, or Poles, rather than Live Trees; both of them seem to have so perfectly lost the Principle of *Vegetation*, that there appears not the least hopes they should ever Recover themselves.

But then if you look upon them again in the beginning of the *Spring*, when both the Old and the Young ones begin on all sides, either to Blossom or Bud, or put forth *Shoots*, you wou'd think they were either performing a kind of Resurrection, or that they were not really the same we lately saw in so deplorable a Condition; and wherein we shall first consider them.

These as well as many other things, wou'd doubtless be very Surprising to us, if they were not common in the ordinary Course of Nature, and if those continual Miracles were not become so familiar to us; though when a Man seriously considers them, he cannot but be much Abash'd at his own Ignorance, and very desirous by all means possible to find out the Causes, and the Manner of such Alterations.

And this Particular affords us Matter for two Nice and Weighty Enquiries: The one is, Whence this Cessation of Action proceeds, which makes the Trees all on a sudden appear Dead when really they are not? And the other is, How that Wonderful Change is Effected, which, a few Months after, puts them into the same Course of Acting as before; so that the Old Trees becoming, in a very little space, as Gay as ever, and the Young ones, as it were, after their Example, Shooting out Roots at the one end, and Branches at the other, plainly shew, that, quite contrary to what they appeared, they still continued Live Trees? As also how they should be always liable to the same vicissitudes of Nature: That as *Autumn* and *Spring* make their Annual Returns, so they make our Gardens their Theatre, and as often present us with new Scenes? For these Trees upon the first Nipping Frost, Return to the very same *Desolate* Condition from which we lately saw them Recover themselves, but as soon as ever the Severity of the Weather is over, they, as it were, Conquer and Triumph over their Enemy which had brought them so very low, and present us with the same Beauty and Agreeable Verdure wherewith they had formerly Charmed our Senses.

Now the better to Represent to others the Conceptions I have of these Different Appearances of Trees, I shall Illustrate them by Plain, Vulgar and Sensible Comparisons.

First then, I imagine an Artificial Tree, of as solid a Matter as you please, of Iron, supple, or Copper, and that it stands upright, exactly resembling a real Tree, and having Tubes or Passages in all parts of it, the greater for the Use of the Trunk, and the lesser for the Branches and Roots.

I imagine further, those Tubs or Passages filled either up to the top, or a good way, with Milk.

Things thus prepared, I suppose this Liquor at Rest, and in its Natural Consistencies, taking up no more space than its ordinary Quantity requires, nor any more at one time than another; but this only so long as no External Heat comes near the Tubes. For as soon as ever the Heat of the Fire comes near either the ends, or the middle of the Tree, I perceive the Liquor begin to move, to Rarefy, as the Philosophers speak, or, as we commonly say, to Boil up, and to fill a larger space than it did before; so that if any part of the Tubes was empty, the Liquor swelling as the Heat encreases, fills them up; or if they were full at first, the Liquor discharges it self at the ends of the Tree. And this it does with such force, that if it could find none, it would burst the Tubes, and make it self a Passage out of a place that was not large enough to contain it.

Green Wood put in the Fire, and sending out a kind of Froth at the ends as soon as ever it begins to Burn, seems to me an Ocular Demonstration of all this.

Now

Now 'tis certain, that if the Ejected Milky Substance thus Rarefied be capable of becoming solid, it will produce, or rather turn into a kind of New Body, which will not give over growing so long as more of the same Liquor shall succeed in the room of that, which after it has been thus Heated, becomes solid; but a succession of such Operations will produce a Continuation of such Effects.

Now by these Tubes I would Represent the Bark of the Trees, and by the Unmoved Liquor in them, the Condition of the Sap in Winter, when the Extremity of Cold, which fixes the Motion of the Liquids, and hinders the Natural Effects of Heat, Thickens the Sap, and renders it so Unactive, that for want of the Ordinary Influence of the Sun's Heat upon it, it remains Immoveable; that is, without any Appearance of Action.

The Fire warming the Tubes, and, through them, the Liquor inclosed in them, Represents the Air and the Earth, which, being in themselves warmed, do also in the very same manner warm the real Trees.

And this I look upon as the Manner and Order of this Wonderful Operation which we see performed every *Spring*. The Air is first Heated by the Rays of the Sun, and from it, both the Bark, and the Earth that lyes about the Roots of the Trees receive their Heat, which they immediately Communicate to every part of the *Plant* which they respectively Inclose.

Upon this, the *Sap* which is Diffused throughout the whole Tree but is especially Lodged between the *Bark* and the *Wood*, where it chiefly operates, and where it Remained, as it were Dead all the *Winter*, having then no motion at all. This *Sap*, I say, as soon as ever it comes to feel the Heat of the Sun in the *Spring*, begins first to move in its Place, and then to Swell and Rarefy, and to require more room than it took up before; and the Hotter the Air and the Earth grows, by the Encreasing Heat of the Sun, the more it Rarefies and Exerts it self towards all the Branches and Roots of the Tree, that it may get out of that Place where it finds it self too closely confin'd. And thus it begins to enter upon a state of Action.

But this first Motion or Action, begins to appear at the upper End of the Tree first, those Parts Heating first, as being most Expos'd to the Heated Air, which does not till some considerable time after, reach those Parts that are fixed in the Earth and consequently those Parts being at Greatest Distance from the Air, are the Last that are sensible of its Heat.

But how far soever this Agitated *Sap* Reaches, it immediately shews what it can do, having this wonderful Quality, that it hardens, and grows solid wheresoever it makes its Passage out.

And indeed this is that which of all others is the most Difficult both to Understand, and to Explain, whether we take notice of the New Growths, simply Considered in themselves, or their Conjunction with and Adhesion to those of the Former Year; or especially the Exactness of the Order, and Proportion of those new Productions we see in the Extreme Parts of each Branch, where we find Leaves breaking out at the same distance one from another. Those of some *Plants* are diametrically opposite to each other, and of others, at certain distances one above another; And again, some Branches are at certain distances so perfectly divided by Knots, that they seem to be Contiguous Bodies, rather than Continued Parts of the same Body, as we see in the *Vine*, the *Fig-Tree*, the *Elder*, &c. And in general, the Origine of Flowers and Fruits, the Difference of their Colour, Taft, Shape, and Smell, and the variety of Leaves and Barks afford us matter of the greatest Wonder and Admiration.

Now to give the best account we can of all this, let us pursue the working of this Heated *Sap* as far as we are able. We have already said, that its first Effects in the *Spring*, do usually discover themselves in the upper Parts of the Tree, as being most Expos'd to the Air. Now those Upper Parts are the *Bolt* and the *Branches*, whereof the Former is more Massive, and the Latter Small and Tender; Upon each of which I conceive the *Sap* Operates after this manner.

The latter being Smaller and more Limber, and having a Finer and more Delicate Bark, are more easily pierced by the Air, than those that are Harder and Larger. And this is the Reason why those smaller Parts, and especially the Fruit-Buds they send forth, are as it were the Fore-runners of the approaching *Spring*. And this appears especially in such Trees as bear *Stone-Fruit*, the Buds whereof are then Perfected, having begun to be Formed at the Latter end of the Fall of the *Sap* the foregoing Year.

And

And thus the first Action of the *Sap* concludes in Raising the Buds, which it opens soon after, and at last, if the rigour of the Season does not hinder, makes the Fruit to Knot in the Center of the Bud, which after it has been the Subject of the *Gardner's* Hopes and Care, is to recompense all his Cost and Pains.

As for the ordinary *Eyes* which appear upon the smaller Branches, particularly those of *Core-Fruit*, the *Sap* enlarges some of them, those especially that are nearer the End, where its Force is the greatest; and entering with less Impetuosity into those that grow along the Branches, it at the same time sends forth Leaves, and lays a Foundation for Fruit-Buds against the next Year; and those of the last years Formation which it finds in any good forwardness, it goes on to Perfect the following *Spring*.

But as for the *Bole* and the largest *Boughs*, the first Action of the *Sap*, when the lenites is over, and it begins to grow Warm, goes no further than to enlarge such *Eyes* as it finds already Formed, and to begin the Formation of New Branches, as sometimes also of New Fruit-Buds, tho' it has not yet received any new supply from the Roots. And this is the reason, that most of the *Branches*, and Trees that are newly Planted, sprout out in the *Spring*, and shew some signs of Life, tho' it cannot thence be certainly concluded that they are really Alive: For these small Sprouts are no sure Proof that the Trees are Recovered, especially at the Lower End, where the great Difficulty lies in producing a good Set of New Roots: There lies the great Press of the Work of Nature in Recovering the Tree, whereto are required much greater Efforts of the moving *Sap*, than in those Parts of the Tree, that are Exposed to the *Air*.

Let us now see what passes in the other Element, as soon as the Warmth of the *Spring* has Allay'd its Natural Cold, and the Heated *Air* has Imparted its Warmth to the Old *Roots*.

We are therefore to Imagine that, as the *Sap* being moved in the *Bole* and *Branches*, requires more space than it took up before, so, being in the very same manner moved in the *Roots*, neither can it be wholly Confined in them; and that as the *Sap* appeared first in the smaller, and then in the Greater *Branches*: So it observes the very same Method in the *Roots* also. The swelling *Sap* breaks the *Bark* that contains it, and gets out at every Passage it can possibly make; and then this, which as well as that above, was Liquid in the Tree, being got out, grows Hard, and assumes the Nature, and Form of *Roots* in the Earth, just as that in the *Branches* becomes Leaves, Fruit, New Branches, &c.

## C H A P. II.

### Reflections upon the Origine, and the Action of the Roots.

THUS then this First and Principal Part of Vegetation begins, Namely, the Producing of *Roots*; Concerning which we are to know that in their first Formation they appear White, much like Bubbles of some Clammy Fluid, and that they continue of the same Colour for some days, while they are shooting out; and after that, this Whiteness, which we may call their Native and Infant Colour turns into a more Lively one, something Red, which represents their Riper state: And while this lasts, all those Greater Operations of the *Roots* are performed. And at last, after a certain number of Years, succeeds a Dusky and Blackish hue, which plainly shews them to be in their Declining Age; Inasmuch that those *Roots* being no longer able to perform any of their Offices, they become not only Useless, but also so Prejudicial to the Tree, that we may fitly Resemble them to Rotten Teeth in Animals. For as those, if they be not pull'd out, serve only to Torment and Disorder the Body: So unless these Decrepit *Roots* be taken away, the Lower Part of the Tree will languish and Decay. And I have therefore shewn, that the taking away of these Old *Roots* is the best means of Restoring a Languishing Tree to its former vigour.

Now of these *Roots* that first spring out, some are Weak, namely such as are Small; and those that are Thicker are also Stronger: And at the ends of the Former of these grow very small Ones, which we commonly call *Fibers*. These last seldom grow to any Considerable Bigness; each *Root* acting in Proportion to those several Degrees of strength or weakness, they naturally have at their first Formation.

tion. And of these it may be truly said, that they serve but to very little Purpose, and that they are of no long Continuance, notwithstanding all the Care and Pains that many *Gardners* take with them. But, for my part, tho' I may have some regard to them, so long as they are in the Earth, yet when they are out, and the Trees are to be Planted anew, I cut them all quite away. And this way of Dealing with them, I endeavour to Justifie in another Place, where I treat more particularly of this matter.

As to those *Roots* that spring out Large, and Strong, and Good, and took their beginning from a vigorous Principle, which they could not do, if they grew out of others, that were themselves Small, these are the chief Sinews and Strength of the Tree. These, as they encrease in Length and Thickness, do also continually prepare and supply more of such new Matter as is proper to be sent up into the Body of the Tree, both to Produce new Growth, and also to Strengthen and Enlarge such as are already Produced at the upper end of it. And to such *Roots* especially it is, that those Trees that Thrive well are beholdling for their Beauty, Bulk, and Fruitfulness.

And here we are to Observe, that there are some Trees and Plants, wherein that *Sap* which turns to Branches because it goes out at the Upper Part of the Tree, which is Exposed to the *Air*, would have become *Roots*, if that part of the Tree, where it made it's Passage out, had been cover'd with Earth & *c'est ce qui s'appelle Marcotte, ou Provigner*. And contrariwise, that *Sap* which in the parts under ground turns to *Roots*, would have been Branches, if it had come out above the Surface of the Earth. And I heartily wish it were as easie to make *Roots* the same way in other Trees, as it is in setting the Branches of *Vines*, *Fig-Trees*, *Quince-Trees*, *Gooseberry-Trees*, *Myrtle*, and some others, for that the Advantages that would thence accrue would be vast, and in a manner infinite, will easily appear by a General Consideration, without descending to Particulars.

And here it may not be Improper to add, That though the Orifices which the Rarely'd *Sap* makes, be ordinarily either Horizontal, or on the Lower side of the *Root*, yet sometimes they happen to be on the Upper side, and instead of *Roots*, send forth *Shoots*, which grow up into New Trees. This Observation is as certain as the former, and yet I am so far from Demonstrating to others how the different Situation of those Orifices alone should be the Cause of such different Effects, that I Ingenuously confess I could never find out a Reason sufficient to satisfy my self therein.

But to return to the Production of the *Roots*, it is easie to imagine how they Encrease in Length and Thickness, by comparing them to a Stream of Water, which grows longer and broader, and stronger, according as the *Spring*, from whence it arises, supplies it with a greater quantity of Water: For just after the same manner, the *Sap* ascending continually from the *Roots* to the upper parts of the Tree, is made use of in all those New Productions we there behold.

But I could never yet think of any Material Agent, that might in the least Represent the manner how the *Roots*, those especially of Trees Newly Planted, do at the same time Grow themselves, and Convey *Sap* to their Trees. And if I were not afraid of Disparaging the Glorious Nature of the Angels, I should borrow a Parallel from them, to make my Conceptions in this Matter the better understood: For indeed, those Spiritual Beings Act with all possible Perfection, from the very first Moment their Creation has given them an Existence. And in like manner, these New *Roots* no sooner appear out of the Old ones, but they immediately enter upon Action in searching out their own Nourishment, and by their Action, which begins as soon as ever they begin to be, they contribute towards their own Encrease in Largeness and Number; and after the very same manner they make the Tree which they Support, equally to Encrease in Thickness and Length, in number of Branches, and quantity of Fruit. And in short, to the great Altimishment of him that Considers them, they all on a sudden, and that too in the very same Action, Effect their own, and the Good of the whole Tree.

The first Set of New *Roots* that the Rarefied *Sap* produces, are not only Employed in Feeding themselves, and the Tree out of which they grow, but they also immediately Contribute to the Production of a second Course of *Roots* which grow out at their ends, and are in all respects like themselves, and whereby they also become both Larger and Stronger; and by the Joint-force of both, the whole *Root* of the Tree becomes Longer and better Fortify'd. And, which is yet more wonderful, this second Range both contributes to the Feeding and Enlarging the first from

from which they sprang, and also by a continued Course of Acting grow bigger themselves, and joining with the former, produce a third Course of little *Roots*, growing out of their Extremities, and so closely Link'd, Interwoven, and as it were Incorporated into the two former, as that it is not possible to Loose and Disentangle them; all which three New *Growths* make up one Body of *Roots*, which is then more able to Act than it was at any time before.

And after that those two former *Growths* have, as I may say, given Being to this third, they both receive from it that Supply which before the first receiv'd from the second; and these continually Enlarging themselves by an endless Succession of such New Productions, and Mutually doing to, and receiving from each other those good Offices that preserve them, they also preserve the Tree in all its parts Alive and Vigorous.

But after all, I must confess I cannot fully Comprehend this continued Miracle of Nature in *Vegetables*. I see plainly, that from the Rarefaction of the Sap the first *Roots* have their Being; but considering them as they Live and Mutually Act, I find it a very difficult Matter to Account for the Acting either of the first or second, or any of the following *Growths*, so immediately after they are formed, for they cannot be Idle and Unactive one Moment after they begin to be formed since that might make them Dye, and thereupon the whole Tree would certainly Dye also.

And what is thus performed in the first Production of *Roots*, may be illustrated by comparing it with the Lighting of a Torch, that will in some measure help our Conception of this first Act of *Vegetation*.—The Torch continues wholly Useless and Unactive in the place that contains it, till a little Fire and Flame, apply'd to it from some other Matter, put it into a Condition of Burning and Flaming it self; the first Fire and Flame by their own Vertue and Action, encreasing in the Torch to which they are Communicated.

Just so the Tree remains Unactive, and without any Vegetative Motion in the Earth, 'till by the Assistance of something else, that is, By the Efforts of Rarefaction, its Principle of Life having made some small Beginnings of new *Roots* at the ends of those old ones it had before, it at the same time begins to perform all the Offices of a Live Tree, those new *Roots* encreasing and enlarging themselves by their own Operations.

And, as in the former Case, the Encrease of the first Fire and Flame proceeds from their Acting, which having melted down something a greater quantity of the Neighbouring Matter that is proper for it to Work upon, it furnishes both the Fire and the Flame with more Fuel, and consequently puts both into a Condition of Acting more vigorously.

After the very same manner the first *Root* being Enliven'd by the Assistance of Rarefaction, which gave it its Being, it enlarges it self to such a Degree, that having got together a large quantity of new Sap, and becoming thereby stronger and better able to perform that kind of Action, it at last produces a great number of other *Roots*; by means whereof, the whole Tree becomes more Beautiful, Large and Vigorous.

We easily perceive that in the Torch, the greater the Heat is the more Matter it melts down; and we observe also, that that melted Matter serves to encrease the same Heat that melted it; and that the Heat thus encreased has still a greater power to Subtilize the Matter upon which it Acts, and to turn it into a proportionably thinner Vapour and Exhalation, and consequently to make a large Flame bigger; and that this Augmented Flame does again encrease the Heat that produc'd it: And thus we see a Circulation of Actions and Re-actions perform'd by the Heat, the Flame, and the Fuel.

And moreover, as in the Torch the more Matter the Fire Acts upon, the clearer the Flame is; so the More and the Better *Roots* the Trees send forth, the larger the Branches also are, and the longer they are like to live.

And this is the Reason also, why Trees standing alone have a much greater number of *Roots* than those that are set against a Wall; because these latter have *Roots* only on one, whereas the other have them on all sides. From whence also it comes to pass, that the former do usually much exceed the latter, both in Height, Thickness and Duration.

And although the Principle of Life, which makes the *Roots* to Act, be at first the same in both, just as the Fire that Lights a great Torch is the same that Lights a little one, yet this Principle of Life seems to grow stronger in a Tree that sends forth many *Roots*, than in one that sends forth but a few; each *Root* according to its

its first Natural strength and bigness, growing as it were a particular and distinct Agent: So that each Preserving and Improving those Assistances which it hath, and still does receive from the Principle of Life, and without which it would remain void of all manner of Action, it every day Acts more vigorously, and does really encrease its power of Acting in proportion to its Length and Thickness, and according as it Multiplies it self; which it does after the very same manner that the first Fire, and the first Flame of a Torch grows stronger by the supply of new Fuel, which they prepare themselves by continually encreasing their Heat and Light; and in both, the larger the Matter is, the greater is the Action; only with this difference, That whereas the first Fire, and the first Flame, do both perish at the same time that that first Matter which gave them Being is Consumed, and as one may say, Annihilated, the Tree's Principle of Life still subsists after it has lost some of its *Roots*. Nay, we see that the taking some of them away proves the most effectual Means of making it Grow and Flourish.

We must therefore lay down this as a certain Truth in the Course of Nature, That in every Plant there is a certain Principle of Life, which continuing the Rarefaction, does also continue both the Being and the Action of the *Roots* in their Formation: That 'tis this Inward Principle, which Co-operating with each of them in those Offices which Nature has Assigned them, Assists them in performing what otherwise it were impossible for them to Effect; and consequently, that 'tis this Principle alone that gives these *Roots* a Power either to Attract, or Receive.

I shall hereafter give my Opinion in this Grand Question concerning the Action of the *Roots*; at present I shall only say, That there are but very few *Roots* that are able to Act of themselves, and when they are once sever'd from the Trees with which they were formed; I only say sever'd; for of *Roots* first pluck'd up, and then set again, I know not whether any are able to Recover themselves, and to Act again: And though the principal *Roots* of *Elms*, *Rose-Trees*, *Vines*, *Fig-Trees*, *Raspish-Bushes*, and some other very sprightly *Shrubs*, may sometimes send forth at that end which was next to the Tree from which they were Cut off, such *Sprouts* as may become *Elms*, *Rose-Trees*, *Vines*, &c. yet 'tis certain that this is a Privilege peculiar to themselves, so that we cannot draw any General Consequence from them, that the *Roots* of other Trees and Plants may do the same; and upon the whole we may conclude, that there is in every Tree a certain Principle of Life which makes its *Roots* to Act, and that too to the utmost of their Power and Capacity.

We must also allow that in respect of this Principle of Life, as well as of the Soil, there is a vast difference between Trees: The Heat of the Sun being equal in it self, does equally Heat a piece of Ground equally Good in it self, and equally Expos'd to its Rays, as it does also all the Trees that are Planted in it, and yet, though they seem'd all in good Condition when they were Set, some of them produce *Roots* in abundance, and others none at all, but languish and Dye.

Which failure must ordinarily be Ascribed to the Trees themselves, and not to the Ground, which we supposed equally well Qualified, nor to the Sun which also Acts equally upon both It, and Them.

The Planted Trees therefore do chiefly Act by their Principle of Life, since it is that which being Animated by the Heat, makes the old *Roots* send forth Young ones; to the Actions whereof the Trees are obliged for that constant Supply of Nourishment which preserves and makes them Grow. Custom has fix'd the Name of *Sap* upon this Nourishment, and therefore we shall commonly call it so, as often as we shall have occasion to speak of it.

### CHAP. III.

#### Reflections upon the Nature of Sap.

BEFORE I proceed to a closer Disquisition about the Nature of *Sap*, which is the same in Plants that Chyle or Blood are in Animals, the Water in the Bowels of the Earth being also the same to Plants, that Food in the Stomach is to Animals, it may be requisite to observe, that as the Earth serves to produce, and nourish *Vegetables*, as having in it a Virtue or Principle of Fertility necessary for such performances, so 'tis also certain that of it self, and unless it be duly moisten'd it cannot perform

perform those Offices. Just as *Sené*, which being of a Purging Nature, does not operate of it self, but by means of a proportionate quantity of Water, or some other Liquid, wherein it is Infus'd, and to which, by that Intuition, it Communicates its Vertue. But as this Purging Quality becomes altogether Ineffectual, if the proportion of Water be too great for the Quantity of the *Sené*, so also the Earth becomes Unfruitful, and Rots Fruit-Trees, as well as most other Plants, if it happens to be Drench'd or Cover'd with Water. It requires some, but not too much Moisture; and too much Wet is altogether as Prejudicial, as too much Drought.

Now wherefoever the Earth is too Dry, it is necessarily Barren; and therefore all the Ground we commonly call Good, is attended with all sorts of Moisture, which indeed is nothing else but real Water diffus'd through every part of the Ground. And this Water comes for the most part, either from Rain, or Snow, or Rivers, or Springs, and sometimes by Artificial Conveyances; which Water having by its Weight sunk into, and diffus'd it self through all parts of the Earth, it becomes, as Philosophers speak, Impregnated with the *Nitre*, or *Fertile Salt* of that Earth: Or, to use the *Gardners* Term, it becomes so far Seasoned with the Quality of that Earth, as to assume its Taste, whatsoever it be, which it Communicates to those Plants it Nourishes. The Truth of which Observation is sufficiently Evinc'd from Experience in Wines, and several sorts of Fruits, which receive different Tastes from the different Soils they Grow in.

One part of this Impregnated Moisture, whether its Tincture be perceivable by Sense or not, serves to make Minerals and Fountains: And another part, as we have just now said, goes to the Production and Nourishment of a Thousand several sorts of Trees, and Plants, and Vegetables; it being in every Earth of such a Substance as may serve for the use of all sorts of Trees and Plants, and is, in effect, nothing else but that Water we are going to Treat of, though it immediately appear very different both in Colour, Taste, and Consistency, as soon as ever it has, by the Action of the *Roots*, enter'd into the several Plants, and that it ceases to be pure and simple Water.

For whereas it was at first Liquid, before it enter'd the *Roots*, it becomes in time, and by degrees, in a manner perfectly Hard, and as it were Metamorphos'd into the Nature either of *Fruits* or *Leaves*, of *Wood* or *Bark*, or *Pith*; and there makes a Body more or less Hard, according as it happens to be dispos'd of into the several *Fruits*, *Trees*, or *Plants*.

And hence perhaps it comes that the Simple Dew, which is sprinkled upon certain Flowers in Gardens and Meadows, becomes changed, part into *Honey*, part into *Wax*, and part into little thin *Coats*, as soon as the *Bees* have with their usual Industry Collected, and by the Instinct and Direction of Nature, Wrought and Separated it.

Now this Hardening of the *Sap* is not to be Ascribed to any Quality peculiar to it self, since 'tis no more than what the *Skin* in *Fruits*, and the *Bark* in *Trees* may be supposed to effect, for both of them are in all likelihood made up of the grosser parts of the *Sap*; and it is easie to imagine that they may have a Power of Communicating their own Density to the *Sap*, when their inward parts come to be Bathed and Drench'd in it. As for instance, When the *Sap* passing between the *Bark* and the *Tree*, not only Ascends, by a kind of Filtration, up to the top of the *Plant*, but also, if it be in a sufficient Quantity, rises even above the top, and adds something to the length of it.

This therefore must be Ascribed to the Vertue of the *Bark*, which in *Trees* makes this *Sap* so Hard and Durable, that it cannot be Dissolv'd, but by a long Continuance in some Corroding or Putrifying Moisture; and to the *Skins*, which in *Fruits* makes only a kind of Congelation, and such a one as is easily Dissolv'd, either by Chewing, or any sort of Heat, or by violent Bruising.

Common Salt apply'd to all the sides of a Vessel full of Liquor, and then encompass'd with Ice, has altogether the same Vertue of Congealing the Liquor in the Vessel. And thus the Industry of Persons of Qualities Servants furnish them in the Heat of Summer with several sorts of Artificial *Snows*, and delightful *Coolers*.

But after all, there remains one very great Difficulty, How both the *Skin*, and the *Bark* themselves grow Hard, and how they afterwards encrease and enlarge themselves. This I must confess, passes my Skill, as indeed do most other things in the whole Course of *Vegetation*.

Neither is this all, namely, That the Water being made *Sap* by the Action of the *Roots*, turns by degrees into a solid Body, but it also undergoes several other Chan-

ges which are no less Wonderful than the former: For one part of it grows Stinking, as when it is to make an *Onion*, a *Leek*, *Wormwood*, &c. Another part becomes Odoriferous, viz. In the formation of *Jonquille Balm*, *Jassimen*, &c. 'tis rank Poyson in *Aconit* and *Hemlock*, and an Antidote in the *Antorax* and *Rhubarb*; it becomes of a bitter Taste, and a viscous Consistency in the Branches of *Stone-Fruit-Trees*, and thinner, but clammy withal, in *Fig-Trees* and *Jujimales*. It is of an Oily Nature in the *Indian-Chestnut*, Clear and Sweet in the *Mulberry*, in *Core-Fruit*, the *Sallow*, and especially in the *Vine* wherein it becomes Wine, which may very well be look'd upon as the great Master-Piece both of Nature and Art, begun by the one, and perfected by the other.

But above all, How can a Man choose but be wonderfully astonish'd when he Considers how that which is nothing else but a sweetish, simple, and harmless Juice, when it comes first to be Lodg'd in the several Cells of the Grape, shou'd, when it is out, make so Rich, so Strong, and so Noble a Liquor.

'Tis strange indeed that this simple Juice, upon its passage out of those Natural Cells (where it first Contracted such an extreme sharpness, and then by degrees became Mellow by the Heat of the *Sun*, which manag'd the whole process of the Ripening) being in a great quantity Collected and Shut up in a Vessel, shou'd pass such a wonderful Change as makes it the Delight of Mankind; for no sooner is it in the Vessel than it begins to Ferment, and to Boil up, just as if its parts were forced up by the Heat of an External Fire; and by the violence of this Natural Agitation it so Purges it self, and comes to such a Perfection, as we shou'd certainly judge Impossible, if we were not Convinc'd by Experience.

But besides all this we are to observe, That this *Sap* which in the *Stocks* of such *Trees*, for Instance, as bear *Core-Fruit*, is Insipid, and the very same in all sorts of such *Trees*, becomes of a quite different Taste in the several Fruits which each of those *Trees* do respectively bear. It has a Flavour in some which it has not in others; it has a Sweet and Sugarish Taste in the *Bergamot-Pear* and *Bon-Chretien*, and an Eager and Harsh one in the *Franc-real* and *Angober*, &c. And that which in the *Quince-Tree* naturally produces a Hard, Sharp, and Unpleasant Fruit, if it go out at one side of the *Tree* into a *Graff* of a *Butter-Pear*, or *Ambrette*, will produce a Sweet Mellow Fruit, and at the other into an *Amadore*, or *Robin*, and the great *Musk*, a Waterish and well Scented Fruit, the different *Graffs* in some *Trees* managing and altering the *Sap* that comes from the *Roots*, much after the same manner as in Water-works the Instruments do the Water that comes from the elevated Source, the Water of each of those Artificial Fountains being Naturally alike dispos'd to Represent any Figure whatsoever, of a *Drinking-Glass*, for instance, a *Crown*, *Flower-de-Liz*, &c. according to the Difference of the Instruments, upon the opening whereof, it being forced out by its own Weight, rises up in various forms.

After the same manner the *Sap* in the *Stock* of a *Quince-Tree*, being equally dispos'd to make any kind of Fruit, is by means of the *Graffs* determin'd to this or that sort in particular.

And the particular Alterations which the *Sap* undergoes by reason of the difference of the *Trees* it enters, are no less Wonderful than Infinite.

The *Juggler*, who of Simple Water which he Drinks Vomits up so many several sorts of Water, all differing in Colour, Taste, and Smell, performs by Art what nearly resembles the Working of Nature in those *Stocks* whereon the slips of several *Trees* are *Graffed*.

Now of this *Sap*, which may properly be said to be nothing else but Water prepar'd by the *Roots*, some part may indeed enter into the very Body of the *Tree* for its Support, as I have already said; but the greatest part of it goes up, chiefly between the *Bark* and the *Wood*, either to make some new Addition in the Height or Thickness of the *Tree* it self, or to produce *Leaves*, *Flowers*, *Fruits*, &c.

## C H A P. IV.

*Reflections upon the Passage of the Sap.*

THE Arguments we have to prove that the *Sap* ascends principally between the *Bark* and the *Tree*, are grounded upon a vast number of undeniable Experiments; whereof the first is that of *Grafting*. Now it is certain that these *Grafts* are not rightly apply'd, but between the *Wood* and the *Bark* of the *Tree*; and that the Experiment wou'd not succeed, unless the *Slip*, or little Branch, that is to be Engrafted, have its *Bark* likewise; and that they be so exactly plac'd one against the other, that the ascending *Sap* may pass under the *Bark* of the *Graft*.

There is only the *Vine* that is *Grafted* without such an exact fitting of the *Barks*; and indeed, to speak properly, it has no *Bark*; for the Body of it being so Porous, that the *Sap* ascends in great quantity both athwart, and into every part, as well of the *Bole* as the *Branches*, it seems to Suck in in the Spring, more Nourishment than any other Plant we know of; and has also a power of Digesting it; inso-much that upon its issuing out of the *Stock*, which it easily does by any the least Incision you can make in it, it will keep a long time without Corrupting, being in that very different from the *Sap* of *Stone-Fruit-Trees*, which will not keep much longer out of its *Tree* than the *Blood* of Animals out of their Bodies, but turns to Slime and Putrefaction, as soon as it is out of its Natural Vessels.

There is, I say, no Plant, but only the *Vine*, that can be *Grafted* by a simple Incision into the Body of another Plant, without an exact fitting of the *Barks* to each other, nor indeed is a *Vine-Slip* capable of being so justly Adapted. 'Tis true indeed all other *Trees* might be *Grafted* the same way as the *Vine* is, if in them as in the *Vine*, the *Sap* pass'd up the *Bole* in such a quantity as were sufficient to join and incorporate the *Graft* into the *Tree*, which it does not.

Hence also it comes that as the *Sap* never passes out of such new Branches in any part of the sides of the *Tree* as are without *Bark*, so neither will it ever pass out of the middle of the *Bole* when the upper part of the *Tree* is cut off, or of the *Branches* that are crop'd, or of any *Stock* when the *Tree* is cut down; whereas ordinarily about the end of any such cut *Tree* or Branch having *Bark*, that being the place whither all the *Sap* that was prepar'd in the *Root* chiefly directs its course, it there forms a great number of Branches which break through the *Bark*, and in their formation fillen upon that part of the *Tree* which is nearest the Breach they have made in the *Bark*; though these Branches are not near so firmly united to the *Tree*, as those are to an old Branch which the *Sap* produces at the end of it.

The second Argument to prove that a great part of the *Sap* passes up between the *Wood* and the *Bark*, may be taken from the quantity of Water which goes out at the ends of a piece of *Wood* while it is in burning; and especially if you burn it soon after it has been cut off from the *Stock* that nourished it, for this *Liquor* issuing out like a whitish Froth, and bubbling out from between the *Wood* and *Bark*, falls down and turns to perfect Water.

From whence I conclude, that this is nothing else but the dissolving of the same *Sap*, which having passed through the *Roots*, was formerly the Nutrient of the *Tree*, differing now from what it was then only in this, that whereas the Moisture upon its entrance into the *Roots*, was by the acting of the *Roots* render'd capable of assuming the Nature and Quality of such *Sap* as was proper for such or such *Trees*, becomes of somewhat a thicker consistency, when the Branch which it was to have fed and enlarg'd, is sever'd from the *Live Tree* to which it belong'd, or when the whole *Tree* is pluck'd up by the *Roots*. In either of these cases it is so, as it were laid to Sleep, that it may be preserv'd whole Years without any Alteration, provided the *Tree* or Branch be kept in a place that is moderately warm and moist; inso-much that such a *Tree* or Branch coming at the Years end to be set again in a good Earth, or *Grafted* upon a good *Stock*, and to have the benefit of a warm *Sun*, flourishes as well as those that were never remov'd out of the places where they first grew. All which is sufficiently confirmed by Experience in *Trees* and *Grafts*, we receive safe and sound from Foreign Parts; and in others, which at certain Seasons of the Year we send thither.

But

But if instead of Replanting this *Tree*, or making use of this Branch for a *Graft*, you put them into the *Fire*, you will see that part of the *Sap* which was not turn'd into the substance of the *Tree*, but only a little thicken'd for want of Action, as soon as it comes to be heated by the *Fire*, first to grow thin, and then to Rarefy it self to such a degree as to pass out at the ends of the *Tree* or Branch in a thousand little Sources; and that *Liquor*, which before its entrance into the *Tree* was really nothing but Water, and which afterwards suffer'd so many Alterations both in Colour and Taste, and Consistency, and other Qualities, recovers the Natural simplicity it had before it enter'd the *Tree*, without any Remains of the Effects of those great Changes it had undergone, except only a little sharpness in the *Smoke*, which doubtless is only Accidental, and to be ascrib'd to the *Fire*, by which those pieces of *Wood* are consumed.

I know very well that 'tis not only from between the *Wood* and the *Bark* that the *Fire* makes this Rarefied Water to pass out, but that it does the same also at the ends of all the inward parts of the *Wood* successively and circularly, as it were one Lair after another; which it does according as the Heat advancing reaches by degrees, and in a circular manner, the inner parts of the *Wood*.

But yet this is so far from destroying my Hypothesis, that the *Sap* passes up chiefly between the *Wood* and the *Bark*, that it mightily confirms it. For every one of the inward parts of the *Tree* having been in their turn, next to the *Bark*, and consequently each soaked in the *Sap* which passed by it, and indeed being it self nothing else but *Sap* condensed, it is no strange thing to see it in its Dissolution return to the same Matter of which it was at first made. And for the further proof of this Opinion, I have two Arguments to offer, both which seem to me very strong and cogent.

The first is, that as it is the *Sap* which being for a time grown thick, and as it were cold, so strongly glues and joins the *Bark* to the *Wood*, that they are not easily pull'd asunder; so upon its being heated either by the *Sun*, in the Spring or Summer, or by our common *Fire*, they become easily separable. And this is easily conceivable to every one that considers that almost the very same thing is every day done in the use of common Glue.

As to the second, you need only take a view of the inside of the *Bark*, and the outside of the *Tree*, and you will perceive in both an infinite number of little Gutters or Channels which are separated from each other by as many little Partitions, which serve to fasten the *Bark* to the *Tree*, and to be Passages for the *Sap* to ascend up to the very top, both to be a continual Supply to all the several parts of the *Tree*, and to add new Growths to such Parts as are capable of Enlargement.

Observing all these little Channels which in every part of the *Wood* appear cross-wise from the *Pith* to the *Bark*, like so many straight Lines drawn from the Center of a Circle to its Circumference, or the *Sun* as Painters use to draw it, and which are plainly seen in cutting a Turnip through the middle, I know not whether instead of assigning the *Sap* passage up into the Body of the *Tree* through the *Fibres* of it, I may not as reasonably conclude, That these are the real Passages by which the *Sap* (which as I have already proved is Lodged, and performs most of its Actions between the *Wood* and the *Bark*) is conveyed into the Body of the *Tree*, to refresh and feed all the inward Parts of it, since I cannot positively determine for what other Use Nature shou'd have intended those little Channels which are made with so much Exactness and Curiosity.

I have already observed, in speaking of the *Water* which becomes *Sap* by the Operation of the *Roots*, that it undergoes a great variety of Alterations in the several Plants into which it is received.

## C H A P. V.

*Reflections upon the Cause of the Difference in Saps, and upon the Effects produced by Engrafting.*

THE Opinion of our Modern Philosophers, who ascribe the great difference that is in *Saps*, as well as in other Sublunary Bodies, to the difference of Pores, is indeed very Ingenious and Pretty: But for my part, I must own, I cannot understand it. I cannot imagine how a Poisonous Juice shou'd become wholesome, an Infipid Sweet, or a stinking one well scented, merely by changing its Place; and

and how its being in certain Pores of such a Figure made it one thing, and then its passing thence into others of another Figure, shou'd make it the quite contrary.

Yet notwithstanding this, I shou'd make no great difficulty of agreeing with so many Ingenious Persons as maintain this Doctrine of Pores, if they wou'd undertake to give as good an account how the great Changes we see in Trees by the means of *Grafts*, might be perform'd the same way. I confess the Comparison between this performance of Nature, and that of a Water Engine, appears very fit for their purpose. It appears at first sight to have so much of Demonstration in it, as may perhaps Puzzle a Man, but I dare say, can never persuade or convince him. The Workings of Nature in the *Grafts* are too dark and intricate to be thereby sufficiently illustrated; and the particulars wherein they plainly disagree, do vally exceed those wherein they seem to agree, and for which the Fancy was so much Applauded, as will appear by insisting upon some particulars, and considering what light this way of Explication can give us therein.

The force of the Water-Instrument, the more it is used, the weaker it grows, and at last quite spends it self; whereas on the contrary, that of the *Graft*, the more it is Employ'd, the stronger it grows.

Again, each of those Instruments can represent but one sort of Figure, while every *Grafted Slip* produces a vast number of distinct Effects, and all differing from one another. As for Instance, The *Bark* produces *Wood, Leaves, Flowers, Fruits, &c.* which Fruits do also differ in their Colour, Shape, Taste, Meat and Seed, &c. Add hereto, that the Slip in producing an infinite number of other Slips, does also produce a like number of new Instruments for the conveyance of its *Sap*; a thing which our Water-Engines cannot any ways be said to do, seeing they are incapable of Multiplying themselves. As also, lastly, That any Water-Engine will serve for all sorts of Water, whereas each Slip is Restrained and Limited to one particular sort of Fruit: Those, for instance, of a *Core-Fruit-Tree*, serving only for the Production of such Fruit, and it being impossible to employ those of any sort of Tree in producing the Fruit of another.

And now what Convincing Arguments does this Comparison bring along with it? And how does it make it barely possible, that a smaller number of Pores shou'd of themselves be able to alter the Disposition of a much greater number of quite contrary Pores?

But that which still adds to the Difficulty is, That the smaller number of Pores in the Slip being, as I may say, become Strangers, Weak, and in some sort already Alter'd by its *Inoculation*, whereas the greater number of Pores in the Tree are, as it were, at Home, and supported by a strong and vigorous Stock, one wou'd imagine that the former shou'd submit to the latter, and yield to the Impressions which the stronger shou'd, according to the Course of Nature, make upon the weaker. But here we see the quite contrary, the stronger shamefully submitting, and all the Glory and Advantage on the weaker's side; that a poor Slip pull'd from the Tree whereon it grew, and deprived of all Assistance from it, which one wou'd think absolutely Necessary at least to preserve it in its Specific Being, and having nothing but a little of its Native *Sap*, shou'd not only Live, and Preserve its own Species, but also be able as it were to Master that so much greater quantity of *Sap* with which it Mixes, *That this small Stream shou'd stop the Violence of so mighty a Torrent, and keep it self within its own narrow Bounds, instead of being hurried away by the Violence of the Current to which it is joined.*

The vigorous Stock was, by the particular manner of its Action upon the *Sap*, which its *Roots* had prepared about to produce a Fruit of such a Taste, Colour, Figure, &c. but the *Sap* finding one or more *Grafts* in its passage up the Tree, accommodates it self to them, and produces both Trees and Fruits of a quite different Nature.

Thus a *Quince-Tree*, for Example, about to produce *Quinces*, which every Body knows to be a Hard, Harsh, Gritty, and Unpleasant Fruit, produces a vast number of very good and sweet *Pears*; and an *Almond-Tree*, which Naturally bears only *Almonds*, is thus made to bear *Plumbs, Apricots, &c.* And all this by means of certain Slips, which being, as I may so say, endued with a Commanding Power, and presenting themselves to the ascending *Sap*, oblige it to pass according to their Directions, and Subject it to all those several Alterations which we daily see in *Grafted Trees*.

Now

Now the better to comprehend how this little *Graft Works*, and by what Power of Nature it serves it self so advantageously of that Mass of Matter which were sufficient to drown and destroy it, or at least make it submit to it, we may not unfitly resemble it to a weak Child, and one that is not of the Royal Blood, placed at the Head of an Army at the same time that it is Engaged. The Army continues resolutely to pursue the Orders it received from its General, till the Young Successor coming to give New Orders, Employs its Force and Courage in the Execution of a quite contrary Design. Now that which enables this New Commander, who is yet a Child, thus all on a sudden to put the whole Army upon a different Enterprize, can be nothing else but a certain Character of Majesty which he carries in his Person, which makes the Army, how Numerous and Brave, and how Hot soever it was upon another Design, at the very first to Acknowledge his Sovereign Authority, blindly to follow, and without any manner of Reluctancy to Execute his Orders; though perhaps it may not do so very long, no longer than till another New Commander shall get the same Advantage over him, which he had over the first. All which we see in some sort performed by the *Sap of the Graft*, which after it has prevailed over that of the Tree, comes it self to be subject to that of another sort upon it self.

But yet after all it must be owned, that though there be nothing either more common or more easie than Engrafting, there is nothing in the whole Production of *Vegetables* that is more Wonderful, or harder to be Understood than it.

It shou'd seem that Nature has here placed the bounds of our Curiosity, Dazling our Sight when it wou'd pierce any farther, thinking it sufficient we shou'd know how to apply the Agent and the Patient together, without discovering the particular manner of that Action whereby such Wonderful Effects are produced; and perhaps if we knew it, we shou'd not be much better *Grafters* than we now are without that Knowledge: And a small Experience is sufficient to teach us both the Manner and the Success of every kind of *Grafts* in all sorts of Fruits. Let us therefore be content to make the best Use we can of what we know already in this Particular, without spending time in endeavouring to advance our Knowledge further therein. Let us fix our Thoughts upon some other Things, which may be consider'd with less Difficulty and more Advantage, and endeavour to discover something that may be of use to us in the Better and Quicker Improvement of them.

From all that has been thus far Discour'd upon this Subject of *Grafts*, I cannot but conclude, That there must of Necessity be something more extraordinary in all this than what can be ascribed to the bare meeting together of certain Pores, some of one Figure, and some of another.

## CHAP. VI.

Concerning the different Effects of the Sap in Plants, and of that Opinion which Maintains the Notion of Pores.

WHEN I further observe that in every Tree a certain Quantity of *Sap*, which of it self is equally disposed to make either *Wood, Leaves, Fruit, or Bark*, passes up into a Branch of a *Walnut*, a *Marroner*, an *Orange*, or *Cherry-Tree*; and that at certain places of those Branches this *Sap*, after it has sent forth Blossoms, which are the first beginnings of the Fruit, comes promiscuously, and without distinguishing it self into parts, to enter the Stalks of each of those Blossoms, how small soever they be; and immediately upon this Progress of the *Sap* thus far, and its passage out of the Stalk, it so dextrously separates it self, that in a *Walnut*, for Instance, one part goes to make a *Green, Tough, and Bitter Bark*, another part the Shell lin'd with Films, a third to make certain Partitions exactly proportioned where the Body of the *Nut* is to be formed and lodged, a fourth the Skin that is to cover it; and lastly, another part makes the *Nut* it self sweet, and without any thing of that bitterness with which 'tis encompassed on every side; and from which it seems to have been Extracted.

When I likewise carefully consider all the other several sorts of Fruit, and observe that in the very same manner the *Sap* passing out at the end of the Stalk divides

vides it self, in order to the forming and making up of those Fruits, agreeably to the distinct Nature of each of them, and that so variously, that in some, that part which we value most is without, and that which we esteem less, within; as in *Peaches, Cherries, Plumbs, &c.* And in others the better part is within, to which the less useful part which is without serves only for a Defence and Security; as in the *Chestnut, Nisfiers, Oranges, &c.* And when I also observe some valuable Fruits, such as *Figs, Perdrigons, Peaches, &c.* exposed to all the Injuries both of Air and Animals, without any other Defence than that of a little, thin and delicate Skin, while the *Chestnut, the Walnut, the Acorn, and Hazle-Nut, &c.* are Guarded with such Prickles, Shell, and Rind.

When, I say, I consider this Constant and Regular Course of Nature in each of these *Vegetables*, and wou'd explain all this by an infinite number of *Pores* of different Figures, I must own my self quite lost in the Contemplation, being not able to Solve any of that vast Crowd of Difficulties, which at the very first presenting themselves to my Curiosity, Disorder and Confound my Thoughts.—I cannot know, for Instance,

How, by what, where, and when are all those *Pores* made? For 'tis evident, they did not come all really made out of the Earth, nor were they Inclosed in the Substance of that Water which the *Roots* make use of in making the *Sap*.

Whether they are all made at once, and separated afterwards, or whether the first have a Power of making others as occasion shall require? For if so, they must be supposed to produce one another in infinite Successions.

And admitting this, how shall I certainly know the Original, and the place of this first *Pore*, which upon its passing out of this small Stalk, is either to produce, or to find in its passage, such a vast number of others as shall be exactly fit to qualify the *Sap* for those several Uses, of *Bark, Substance, Seed, Smell*, and all the other Parts and Qualities of the Fruit they are to make.

Whether this small Stalk be really the Womb where all those *Pores* are formed, or whether it is any more than a Chanel through which they only pass, without leaving any of their number behind, when they go to make such fair, useful, delicate, and well-scented Fruits.

How this Number of *Pores* so range themselves in the Stalks of Fruits, as to make them always exactly of such a determinate length; In Leaves, so as to make that half Leaf *en camr* which we find before the great Leaf in *Orange-Trees*: In the *Walnut* and *Almond*, to preserve the respective bigness of their Shells: In *Plants*, to observe the same distances between the knots whereby they are at certain lengths, distinguished, as in the *Rose-Tree, the Vine, the Sureau*, as also in *Corn*; and to perform all this with so much exactness and proportion.

Furthermore when in the Months of *January* or *February*, Thirty *Melon-Seeds*, for Example, being set in the same Bed, are so far from Sprouting or Growing up all together, that there is sometimes Three or Four, or Five or Six Months space, between the first and the last.

I wou'd gladly have those that will needs have *Vegetation* performed by a forcible bringing in of certain little Particles of Earth into the *Plant*, Resolve me in these Particulars.

First, Whether Particles thus brought in, have *Pores* or not? If they have, then we shall have *Pores* brought one into another; And then pray consider, whether such a Notion as this will lead us.

Secondly, Whether the *Pores* are all first Form'd before the *Seed* is Set, or whether they are afterwards made by the Heat of the Bed? They cannot say it is done the latter way; and if the former, I Demand further,

Thirdly, Whether those *Pores* are always open and ready to receive, or they are open'd by the Heat of the Bed?

Fourthly, Supposing those *Pores* always open, I wou'd know whether they have any thing within, or Nothing?

Fifthly, Upon this Supposal that they are all open, I ask further, Why those in one Seed do not as well, and as soon draw in these Earthly Particles as those of another?

Sixthly, Granting this Introduction of small Particles of Earth, How comes it to pass that those Particles, which in all things else appear plainly to go upward, enter into the Seed for no other end, but only that they may immediately pass out again downwards, that so they may be turn'd into *Roots*?

Seventhly,

Sevently, I Demand whether new *Pores* are Formed in the *Root*, and the Introduced Particles come in only through those new *Pores*, or whether they still continue to come in only through those of the Seed, through which they first enter'd in to make their *Roots*?

I would also further know, Whether one sort of *Wood* be more *Porous* than another? I own that some have larger *Pores* than others, as the *Liege*, for Example, than the *Ebene*: But I cannot conceive how one should have more than another, since all are made up of little Parts which come together successively one after another.

Now if all *Roots* be equally *Porous*, how comes it that some Act more vigorously than others? The *Vine*, for Instance, and the *Fig-Tree*, make abundantly more *Roots* than any other Trees.

Is it not reasonable to ascribe these Effects to a certain Principle of Action which exerts it self more vigorously in those than in any other *Vegetables*, just as we see more of vigour and sprightliness in one Man than in another; and in one sort of Brutes than in some of another Kind?

I would also fain know, whence it happens, as we see it often does, that certain Trees newly Planted remain a long time in the Earth, some two or three Months; nay as many Years, without any the least appearance of Action: As also how some Seeds continue whole Years without Sprouting?

This questionless must be acknowledged a matter of great Difficulty, and very Obscure. In short therefore, I will take it for granted, that there is more in the effecting of all this, than a meer meeting together of certain great or little *Pores* of different Figures. That we must look higher for the Original of that *Vegetative* Faculty, and own that Principle of Life to be neither a Free nor a Casual, but a Necessary Agent; concerning which I shall speak more at large hereafter, which by means of an External Heat, and a due Proportion of Moisture, is determined to Form those several Particles of Matter, some into Skin, others into Pulp, others into Juice, some to give the Fruit its Relish, and others its Sniell; some to become Seeds, others Stalks of the Fruits, and others the Wood of the Tree, &c. And it is this also that, by means of the *Sap*, which it Prepares in the *Roots*, makes the Trees capable of receiving an infinite variety of Alterations, just as the Moisture of the Earth makes it capable of Producing, or rather indeed of being Instrumental to the Production of so many several sorts of *Plants*, all different one from another.

The *Living Stock* of each Tree is, in effect, the same to *Grafts* that the Earth is to *Seeds* and *Plants*; and in some sort the same that the Air is to the Different Instruments of Music, or Water to the Instruments of Water-works: That is, the *Sap* in each of those Stocks is equally dispos'd to produce this or that Effect, and consequently is capable of great Alterations, according to the difference of the *Grafts* which are set upon the *Stock*; between which and them, there must however be some sort of Natural Agreement.—Though after all, the farther I pursue this Enquiry, the greater Difficulties I find my self Entangled in, and the less able I am to satisfy my own Curiosity.

I should very willingly Embrace this New Opinion, if it could not shew me all the several Figures of those Wonderful *Pores*, but only Teach me, how, upon occasion, to direct Nature to make such *Pores* as were for my Purpose, and to hinder the Making of such as were not. But now that there is no great likelihood that this Philosophy will ever procure us such an Advantage, since none has yet been able to attain to it, and that notwithstanding all that is, or can be said, we must have Recourse to Divine Providence, and Assert that if what those Gentlemen Advance be true, that every particular Kind of Fruit is of such, or such a Taft, Bigness or Shape, merely because its *Pores* are of such or such a Figure: (I say we must Assert) that tis the Divine Providence alone that has Ordained, that *Pores* of such or such a Figure shall certainly make such or such a sort of Fruit. And then Pray, what New Discoveries has this Philosophy made towards finding out of the Nature of Individual Beings? And did not the Old Hypothesis go altogether as far in searching out the first Workings of Providence?

But if in favour of this Opinion it be urged, That one day *Lunetts* and *Microscopes* may possibly be Invented, whereby these *Pores* may plainly be seen and distinguished, and that there wants only Time and Industry to bring all this to pass; may it not also, with as good Reason be hoped, That the same Instruments may serve to Discover the Attractive Motion of the *Roots*, against which those Gentlemen so eagerly

eagerly contend? Though to speak my Mind freely, I cannot understand what a Company of *Pores* is able to effect; how each should be join'd to its Fellow, so at least as to make up any thing that is not it self a *Pore*; what their sides are made of, and what they are join'd together with. I am indeed of Opinion, that in every one of the Works of Nature there are a great many of these *Pores*; as also, that they are much bigger in some Bodies than in others. But since *Pores* can be nothing else but little Bodies, that is, Figured Cells, having no solid Matter within, and compas'd about with their own sides, those sides must of necessity be solid; and also be join'd together by something else of a Nature different from their own. And this will engage us in such deep Speculations, as are not less difficult than the Ideas of Accidents and Occult Qualities; which I think is as much as needs be said, for 'tis no more possible that a Concourse of many *Pores* should make up a solid Body, without being determined by some other thing that is solid, than that in Arithmetic a Line of Ciphers should make up an Effective Number, without having at the Head of it some one of those Nine Principal Characters, which Custom and Common Consent has Vested with a Power of Determining what each of those Ciphers shall stand for in Numeration.

Their Notion, who hold that all these Changes can be Ascrib'd to nothing else, but such different Qualities as the Great Author of Nature has thought good to fix in the several kinds of Bodies, is more easily conceiv'd, and better understood, by my weak and shallow Reason.

Though after all, I do not pretend Magisterially to Determine, whither of the two Opinions has the more of Certainty and Reason on its side, my Business being only to present to the World those Thoughts which my Study, and the Remarks I have made upon *Vegetation*, have suggested to me. And in this Particular I shall use the same Diligence I have done in the rest of the Book.

'Tis true, I have upon Occasion consider'd several other Parts of the Works of Nature, and observ'd how the Heads of some sorts of Birds are Adorned with Tufts and Combs, whilst others are Distinguish'd either by the Feathers, or the Make of their Bodies.

And I have also often Admired the Melodious and Charming Notes of the Nightingale and Canary-Bird, while those of the Magpy, the Jay, and the Crow, are so harsh and ungrateful. And how wonderfully satisfied am I in my self, when considering these, and an infinite Number of other Particulars, I Resolve all mercerly into the Good Pleasure of the Great Author of Nature, which Ordin'd all these pretty Marks of Distinction that make up that Wonderful Harmony and Agreement in this Great Machine, the World, without ever Troubling my self to consider how possibly, by the help of this Doctrine of *Pores*, all this might be well, and convincingly Accounted for.

So that Referring all this Variety we see in *Flowers*, and *Fruits*, and *Seeds*, immediately to the Providence of God, I shall only add, That so Wonderful has been the Contrivance of the Great Creator in every, the smallest piece of his Workmanship, as well as in those great ones, the Heavens and the Earth, as shews his Wisdom and his Power to be equally Infinite.

## C H A P. VII.

### Some further Considerations upon the Action of the Roots.

**B**UT to Return to the *Roots of Plants*, and to see what Useful Instructions may be drawn thence for the Advancement of *Husbandry*, let us something more closely consider, whether the *Roots* have really any Attractive Faculty, whereby they, as the *Muscular Veins* in the Body of an Animal, do, at their Extremities, Draw to them, and Suck in the Impregnated Moisture of the Earth, or whether like the Cover of a Pot, they only by means of their *Pores*, receive the Vapours and Exhalations which are continually ascending out of the Bowels of the Earth.

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Each of these Opinions has its Patrons and Friends; and indeed, both seem to be Supported by good and plausible Reasons. But my present Business being only to offer my own Observations upon *Husbandry*, I shall be as Reserv'd in giving my Judgment in this, as I have been in that other Case of *Pores*, and declare Ingeniously, That I am not able positively, to Determine in Favor either of the one, or the other.

And yet how Difficult soever it may be to Explain, or even to Conceive a clear Idea of what we call *Power*, or *Quality* in Sublunary Bodies, I cannot but own my Inclination to Approve rather of Living and Attractive Powers, than an Inanimate and Lifeless Row and Order of *Parts of Matter*. And indeed it seems to me very Reasonable, to Assign Action to that alone which has need of it, namely, to *Plants*, to the end they may Attract, and Suck in such Nourishment, as may be Necessary both to Preserve and Enlarge themselves, and to Multiply their Species. And thence I conclude, that 'tis they that Act.

Without doubt the Earth would not grow Lank, Meagre, and Hungry, as it does, if the *Plants* did not Suck it just as Animals do their Dams; and as they do not tarry till the Milk comes to find out them, so neither do the *Plants* expect till the Vapours and Exhalations come and present themselves to the *Pores*. This Moisture rises up continually out of the Bowels of all sorts of Earth, though those Earths do not thereby cease to be still Fresh; that is, in a Condition to produce all sorts of Fruits. And since it is utterly false that the Goodness of any Rich Soil Decays, or is in the least Diminished by being not made use of in Feeding some set *Plants*, it necessarily follows, That when such an Earth fails of its usual Fruitfulness, as it sometimes does, even to perfect Barrenness, this Decay must proceed from the Activity of the *Roots*, which by their Attractive Motion have Exhausted all that Fruitful Salt which Nature had furnished it with. And if we observe how the *Roots of a Plant*, set in a Chest of Earth, get out in great Numbers, at such Holes or Crevices of the Chest as are nearest the Ground, that they may there Grow and Multiply, I know not whether we may not, with very good Reason, allow them a kind of Local Motion.

And indeed, it is for Reasons that Incline me to Favour this Opinion of an Attractive Power in the *Roots*, that I do leave but a very few *Roots* upon the Trees I Plant; for if I imagined that the *Sap*, which the Tree requires in great Abundance, did without any Action in the *Vegetable*, barely enter into the *Roots* through such Holes, or *Pores*, as it found open, I should certainly believe that the more old *Roots* I left on, the more *Pores* or Holes to receive the *Sap* I should also leave, and that it would ascend in greater quantities into the Bodies of such Trees, than of those that had fewer *Roots*.

But my own Experience shews me that all this is false, and that a good Tree, of what sort soever, being Planted in a good Earth, with a few *Roots*, and reasonably short, Grows much better and quicker than another equally Good, and Planted at the same time in as Rich an Earth with many long *Roots*.

And in this Case I think I may safely rely upon my own Experience, since I herein advance nothing but upon above Thirty Years Tryal and Careful Observation.

And upon the whole, I lay down this as a standing Rule, That the more old *Roots* you leave upon the Tree you Plant, the fewer and the worse the New ones will be which it lends forth; whereas the fewer you leave, provided they be good ones, and indifferently short, the more and the better the New ones will be. And to this I chiefly Ascribe the different Successes we usually observe in Planting.

## C H A P. VIII.

### Considerations upon the Vital Principle in Plants.

**I** Lay down this as another Maxim which I think never fails, and which, having already spoken something of it, I come now more fully to Enlarge upon; Namely, That there is in every Tree and Plant a certain Principle of Life, which being Alit with all the necessary Circumstances of a good Earth, due Moisture, a favourable Sun, &c. makes every part of the Tree or Plant so to Act, and Perform all its Offices, that they all continue in their Natural Vigour, so long as this

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Vital Principle is not injured; and that as soon as it is destroyed, the *Plant* immediately Dies.

But this Vital Principle is not in all *Plants* lodged in one and the same place; for in some 'tis lodged in that outward Eye of the *Plant*, which is the first that appears above Ground, and distinguishes it from other *Plants*, as in *Melons*, *Turnips*, and all sorts of *Annual Flowers*; and this being cut off, all the rest of the *Plant* immediately dies, and that without recovery.

In others 'tis seated in the Ball of the *Root*, as in *Tulips*, *Jacintes*, *Imperiales*, *Anemones*, &c. And these *Plants* do not die, but when their round *Root* is spoiled by Heat, or Cold, or Wet, or by being cut or bruised; nor will the taking away the fore-mentioned Eye do them any great hurt.

In others, besides its principal Seat, which I shall speak of by and by, when I come to Treat of *Great Trees*, 'tis diffused like a kind of Seed through all the remoter Parts, as is evident in the Branches of *Vines*, *Fig-Trees*, *Quince-Trees*, *Salvors*, *Jays*, *Giraffes*, *Faunes*, and in general of all sorts that easily admit of either Engrafting or Inoculation.

Lastly, In others, as in all *Trees*, both those that do, and such as do not bear *Fruit*, this *Vital Principle* seems to be between the *Bole* and the *Roots*; for the Upper Parts may be cut off, and the *Roots* taken away, provided nothing be done to the very place where it is lodged, and yet the *Tree* be so far from being prejudiced thereby, that on the contrary this will make it send forth both more Branches, and more *Roots*.

Now that which gave me the greatest Light in judging of the Seat of this *Vital Principle*, was the Observations I made upon the Sprouting either of *Almonds*, or *Peach-Stones*, or the Seeds of *Melons*, *Lettuces*, or any other sort of *Pot-herbs*; that when they come once to be thoroughly moisten'd, and heated in the Earth, the Substance of each swelling fo, as not to be any longer contained within their respective *Shells* or *Skins*, it makes it self a passage out at the sharpest part of the *Shell* or *Seed* howsoever it happen'd to lie in the Ground; and thence issues out first the beginning of a *Root*, white, and proportionable to the *Nut*, or *Seed* out of which it springs. This, directing its course downwards, grows longer and thicker, and sends forth other small *Roots* all along on every side of it. And all this it does before any thing appears to ascend upwards to the surface of the Earth.

But at length when the *Root* has so fixed and strengthen'd it self, as to be able to support and nourish the *Plant*, whereof it is to be the Foundation, then at the very same place where it sprung out, the *Nut* or *Seed* perfectly opens it self, to give a passage to the Stem, which begins its Formation exactly in the same place with the *Root*; and by degrees it works it self through all the Earth that lies upon it, and at last appears above Ground in a few small Leaves, which shew both the Top of the *Plant*, and of what kind it is, and so grows up to its natural bigness.

I hold then, that there is in *Plants* a certain Principle of Life, and that is the very same that Philosophers call *The Vegetative Soul*; and that 'tis a necessary Agent which at certain times cannot but act, and that too sometimes after such a manner as Men shall direct.

But to make it do so, care must be taken, that That part of the *Plant* where this *Vital Principle* is chiefly lodged, be perfectly sound; that the Principle it self be moved and actuated by a just degree of Heat; and lastly, that if the *Plant* have *Roots*, they be sound, and set in a good Earth, duly moisten'd. But for the better clearing of this Particular, it may be necessary to observe these four Things:

First, That that part of the *Plant* where the *Vital Principle* is seated be sound, and in good condition: For if it be in the least Putrified or Corroded, or have suffered any thing from Cold, Drought, or any other Accident, it will receive no benefit from that Heat which *Plants* require, but will at best Thrive but very ill, and perhaps quite die away.

Secondly, That it be Cherished with a due and a proportionable degree of Heat, both in the the Earth, and in the Air; For some *Plants* are soon Heated, and put into Action, as all *Spring-Flowers* in General, the *Indian Chestnut*, the *Raspis*, the *Sparagus*, and most Kitchen-Herbs, and particularly the *Oignons de Coronne Imperiale*, the *Tulip*, and some others; some of which shoot out their *Roots*, and others their Stem, without being set in the Ground; and that too when the Power of Vegetation seems to be as it were asleep, namely in the month of *August*.

And others again are of a colder Complexion, and harder to be moved; such as the *Mulberry*, *New-Jeds*, *Sweet Charvil*, &c. And therefore 'tis no wonder if all

all *Plants* do not enter upon Action at one and the same time, tho' the Heat both of the Earth, and of the Air, be the same to all, and upon that Consideration might be supposed to Influence all alike. So that it is evident, that 'tis the different Nature of the *Plants* that makes them quicker or slower in entering upon a state of Action.

Thirdly, That the Action of the *Vital Principle* is limited and confined to certain spaces of Time, which in some *Plants* are much longer than in others; as in all larger *Trees*, and especially in those we commonly call for distinction sake *Green-Trees*, such as the *New*, the *Espicier*, the *Holly*, &c. as also in the *Orange-Trees*; In most of which *Trees*; it scarcely ever gives over Acting either in Summer or Winter, provided none of those four Qualifications be wanting. In other *Plants* this Season of Action is much shorter, and can by no means be prolonged beyond that time Nature has assigned it, as in *Lettices*, *Pease*, *Tulips*, *Anemones*, *Hyacinths*, &c. all which have but a very short time of Action, and appear in a manner quite dead within a very few months after they first began to give any certain signs of Life.

The last thing I am to observe is, That the *Roots* must not only be sound, but also set in a good Earth duly moisten'd: For if the *Roots* be Damaged, either by drought, or any other way; or if being Sound, they happen to be set in an Earth that is either bad, or exhausted; or lastly, if being good, it want due moisture: In any of these cases, you will not be sensible of any manner of Action the *Plant* performs.

And this is a Truth which every body knows, so that I need not Enlarge upon it. We see daily Instances of it, especially in the Spring, in *Trees* both kept in Chests, and newly Set. For if either of these want moisture, without which they cannot Act, and consequently grow too Hot, and Dry, they immediately seem as it were Faint, and in a dying Condition; but no sooner are they wet either with a Shower, or by the Gardiner's Hand, then you immediately observe in them just such another Change as is made the same way in Persons recovered out of a Swoon.

For as in this latter Case, Persons in a Swoon recover themselves by receiving a little Wine, or Spirits; which Recovery is perform'd by the Nutritive Faculty, which coming to Act upon this new Supply of Nourishment, makes use of it as a Remedy, and dispenses it out of the Stomach, where it received it, to all the Parts of the Body: Just so when the *Tree*, which either in a Chest, or newly Set, had suffered for want of Water, comes to be Refreshed by a new Supply of Water, its *Roots*, and especially the extreme Parts of them, being thoroughly moisten'd therewith, immediately the *Vital Principle* begins to act again upon the moisten'd Earth, and sends up a great quantity of Sap, which distributing it self into all the several Parts of the *Tree*, its *Boughs*, *Leaves*, *Flowers*, and *Fruits*, puts them all into the very same condition they were in before, when for want of moisture the *Roots* gave over Acting.

And this it does, provided this Cessation of Action be not too long, which if it be, 'twill kill the *Plant*; the *Vital Principle* being not able to preserve it self, if it have not always something of moisture to work upon, (which moisture it can have no way, but by the Action of the *Roots*;) just as continual Evacuation, and long Abstinence, prove mortal to Animals, which cannot live any considerable time without fresh Supplies of Food.

And 'tis likewise to be observed, That *Flowers*, and *Fruits*, and *Leaves*, which are all tender, and short-lived, have much more need of constant Supplies of Sap to keep them alive, and to preserve their Beauty, than the Stocks, or other Parts of the *Tree*, which being more solid and massive, will live a long time, though the *Roots* should perform no Action that might any way advantage them.

We are further to note, That though the greatest part of the Sap, that is prepared in the *Roots*, goes up into the upper Parts of the *Tree*, yet it does not equally at all times make them grow longer; sometimes it does only, and that too so as we cannot perceive it, strengthen its Parts, and enable it to send forth fairer Stems; whereas when the Sap goes up in a greater abundance, it makes it shoot out in Length, as we often see it does in a double Quantity, at both the *Solstice*, and at the *Vernal Equinox*.

And in the last place I hold, That the *Vital Principle* being duly moved, and quicken'd, serves as an Instrument to Enliven, to Strengthen, and to Envigorate the *Roots*: So that the Strength or Weakness of their Action, depends wholly upon the Strength or Weakness of the Motion or Impression they derive from this Principle;



have its Centre in the upper, rather than in the lower Parts : The Resemblance in the subtilty of their matter, which seems to be found between *Sap* and *Light*, will, I hope, make my Comparison allowable.

But how far soever it may hold in some Respects, yet I am very sensible there is a considerable difference in others. For as *Light* diffuses its strongest emissions upon those parts of the Air that are nearest to the Luminous Body, which is their Source and Original Cause, so likewise it grows sensibly Weaker in the Remoter Parts, in proportion to their greater or lesser distance from that Source. And this is grounded upon the Order of Nature, which hath determined every Agent to a certain limited Sphere of Activity, and to Act more powerfully upon those Objects that are at a Reasonable distance, than upon such as being further off, are in some manner out of its reach.

But now on the contrary, the *Sap* produces its most considerable Effects, in those Parts which are farthest distant from the *Roots*, from which it is originally deriv'd. For having a Natural tendency to raise it self, with impetuosity to the Extremities of the *Trees*, which are its proper Centre; it only makes a quick and brisk Passage through all the other Parts, which are the Channels to convey it to that Centre.

We find then, That the *Sap* which is prepared by the *Roots* in the Ground, makes its first Entrance in great Plenty into these Extremities of the *Branches*; the other parts of those *Branches*, tho' nearer to the *Trunk*, receive no benefit from that *Sap*, but proportionably as they lye nearer, or farther from the *Spring* which produced it. The only Advantage the Lower parts of those *Branches* can get from it, proceeds merely from the abode which that *Sap*, in its continual Ascent towards those Extremities, is sometimes forced to make in the Neighbourhood of those Lower parts. This abode happens, when that which was already come up of the first *Sap*, being not able to break out soon enough to be employed in putting forth *Branches*, *Leaves* and *Fruits* is a hindrance to the Attempt of that which comes after it, and consequently stopping it by the way; for a while makes it tarry at some distance from those extremities, till the passage be opened for it, to issue out as the foregoing *Sap* did.

And methinks, This seems to have a great Resemblance with what often happens in a Stream, that is stop'd in its descent by some Dam. This Stream hastening to its Centre beyond that Dam, runs continually toward it, with all the swiftness that the pressure of its own Weight can afford it. In the mean time, all the New Water which flows every moment from the same Spring, from whence both of them are deriv'd, striving naturally to follow the Course of the foregoing, which issued out first; 'tis intercepted in its passage by that first, so as it cannot reach even the Dam; by reason that the first having as it were seized upon that principal Post, hinders it from flowing any further, just in the same manner as the Dam hinders the flowing of the first.

From hence it comes to pass, First, That both being so stop'd, there is a great Conflux of Water made in a certain Tract of Land. Secondly, That those parts of that Water, which are most distant from the Dam, dilate themselves on every side, and consequently Wet, Nourish, and even Drown sometimes the *Plants* growing on its *Banks*, which would have been neither Watered nor Nourished, could that Water instead of meeting with the said Dam, have freely arrived whither its own Decivity would have carried it.

In like manner the *Sap* whose Source is in the *Roots*, having a natural propension to Rise up to the Extremities of the *Branches*, to which it tends as its own Centre, is, as we have already said, sometimes stop'd far enough from its designed mark, by that which ascended first, and which had not time enough by issuing forth to complete its intended Work.

If the *Sap* which ascended last, continues never so little in the place where it is stop'd, it never fails of producing some New Effect, which shews it has been stop'd there: for its abode is never useless wherever it be; and the Effects produced by it are these.

Where it is in great Plenty, as it usually is in the *Trunk* and bigger *Branches*, the more Active parts of it which are got nearest to that which ascended first, are prepared there in some Measure, to assist that which came up first, in putting forth New *Branches*, differing in their bigness and number, according to its plenty: (in what Order these *Branches* are produced, I shall explain hereafter) but that which is less Vigorous, doth the same every where about it, which a small quantity of *Sap* appears to do in *Branches* of a lesser Size; *Viz.* Both of them Form these

those Protuberant and Round Eyes which meet near their Passage, and Place of their abode, and by that means begin, and sometimes finish the *Fruit-buds*; Namely, when the *Sap* is happily Temper'd to such a Degree, as is necessary to bring them to perfection. The Consideration of this, has induced me to lay down this Maxim, That the *Fruit Buds* grow sometimes upon the weak of the Strong, and sometimes upon the Strong of the Weak.

## C H A P. X I.

## Reflections upon the Production of the Fruit-buds.

FOR the better Understanding this Maxim, it is to be observed, That the former part of it Relates to those *Fruit-buds*, which tho' they grow sometimes upon the bigger *Branches*, yet it is only in the parts which are farthest distant from their Extremities, that is to say in the lowest part of the *Branch*: The Second part of it is concerning the *Buds* that grow upon the Weak *Branches*, in a place quite contrary to that of the big ones; *Viz.* In the very Extremities of them.

There are then, as you have already heard, two sorts of *Branches*, Strong and Weak, upon each of which these *Fruit-buds* are formed; and I think I may presume to say, That the *Sap* which is diffused through the whole extent of those *Branches*, makes there as it were a Body of *Sap*: I am forced to express my self in these Terms, to render my Maxim more intelligible.

There is no question to be made, as I have before intimated, but that a far greater proportion of that *Sap* rises up to the Extremity of all sorts of *Branches*, than remains of it in any other parts.

Now I give the Name of *Strong*, as well to the whole *Branch* that is big and strong, as to that part of all sorts of *Branches* whatsoever, where the *Sap* is gathered in a greater quantity.

And I call *Weak*, as well the whole *Branch* whether small and weak, as that part of any sort of *Branches* whatsoever, which partakes of that *Sap* in a lesser quantity.

This being suppos'd, I positively affirm, that in the big and strong *Branches*, where there is a greater confluence of *Sap*, that *Sap* forcing it self upward to their Extremities, is consequently convey'd thither in great Plenty. But that abundance as great as it is, may be fit to cause the putting forth many *Branches*, but is not Adapted to the making of *Fruit-buds*. For experience tells us, that these are never brought forth, but in those places where there is a just proportion of *Sap*, *Viz.* Neither too much nor too little.

And 'tis for this Reason probably, That we never see any *Fruit-buds* growing at the Prun'd or Lopp'd Extremity of a big *Branch*, except when the *Sap* has been diverted by some unknown Obstacle, from Rising up to it altogether, according to its usual Course; but upon the lower parts of the *Branch*, where the *Sap* is neither so plentiful nor so stirring, they are frequently produced.

And this is the Reason, that induced me to lay down this as a Maxim, That the *Fruit-buds* grow sometimes upon the Weak of the Strong; That is to say upon the Weak part of the Strong *Branch*, where by Weak, the lower part of the *Branch* is to be understood; forasmuch, as there being really much less *Sap* in the lower, than in the upper part, or Extremity of the *Branch*, it has by consequence a greater disposition, to bring forth those lovely *Fruit-buds* which so justly challenge our Admiration.

The former part of this Maxim being well understood, there will remain no great difficulty in the latter; so that when I say, That the *Fruit-buds* grow sometimes upon the Strong of the Weak the meaning is plain, that they shoot out at the extremity of the weak *Branches*, wherein, tho' indeed there is but a small quantity of *Sap*, in comparison of what is to be found in the big ones, yet there is more of it in the extremities, than in any other parts of the same *Branches*, and therefore enough to make up the just measure, which is necessary to the Frame or Conformation of those *Fruit-buds*. And this is the true Reason, why the middle siz'd *Branches* that are neither too big nor too little, are commonly first loaded with *Fruit-buds*; the first years they begin to put out *Buds* at their ends, then continue from year to year to bring them forth in their whole length, but afterwards they shift from one part to another,

still drawing back by degrees nearer to that big *Branch* out of which they spring, till at last they come to bear in that which is nearest to the place from whence they had their first Production.

## CHAP. XII.

### Reflections upon the short continuance of the Fruit-bearing Branches.

I Have observed elsewhere, in Discoursing of the means to prevent the ill Accidents, to which the *Fruit-bearing Branches* are Subject, that those *Branches* never last long in any *Trees*: But that in *Stone-Fruits*, and especially in *Peaches*, they never bear twice successively in the same place. Commonly they die in the very year of their bearing, which is the following year after their shooting forth. But if any of them escape, the Reason is, that being grown a little bigger than they were, they put forth out at their Extremities, some other Fruitful *Branches* against the next year; but after that time they become Dry and Useless, and by consequence must be cut off.

In *Core-Fruits*, the *Branches* last somewhat longer, and continue bearing throughout their whole Length 5 or 6 years successively, till at last they fall by the Common Fate of *Fruit-bearing Branches*, that is to perish by their own Fruitfulness.

It is not improbable, but that the same thing may be said, in Relation to the dying of these *Fruit-Branches*, that is generally observ'd in the *Fruits* themselves, which decay constantly in a certain time; and the Resemblance between them, is, in my Opinion, well enough Grounded, to admit the Comparison. For as the first degree or mark of Corruption in *Fruits*, is the perfection of their Ripeness; that is to say, they are then nearest to Corruption, when they have attained their compleat Maturity; so likewise in the *Branches* their beginning to bear, is the first Sign of their approaching Destruction; that is to say, according to the Common Observation of *Gard'ners*, they begin to die, just in the same Moment, that they begin to bear *Fruit*.

Now to give some probable Reason of this particular Destruction; it cannot be said, That the *Fruit-bearing Branch* destroys it self, seeing it hath no peculiar Action distinct from the general Action of the Plant, whose great End is self-preservation. It is then more to the purpose, I conceive to say, that those Parts (*Viz.* The *Weak Branches*) through which that small quantity of *Sap* passeth, which makes the *Fruit*, being not stored with a sufficient quantity of *Sap* to strengthen themselves, and to resist the injuries of the Air, do first begin to dry up insensibly, and soon after wholly wither and Dye: Whereas the other parts which are furnish'd with it in greater Plenty; *Viz.* The *Strong, Thick, and Vigorous Branches*, being daily supplied with New *Sap*, and thereby Fortified against the Injuries of the Air, have also the good luck of a longer continuance.

## CHAP. XIII.

### Reflections upon the inward Contexture of Fruit-buds.

IT is a Question that has extremely puzzled the Curious, to explain the inward Frame of these *Fruit-buds*, and I must confess, that the Contexture and Arranging of those little Leaves enfolded in one another, which make up those *Buds* and distinguish them from the other parts of the *Tree*, are an ample Subject for a very Curious but difficult disquisition; and I should be extremely glad to Arrive at a perfect understanding of this wonderful Master-piece of Nature.

But after having a great deal of pains to little purpose, I am forced to acquiesce and satisfy my Curiosity, by saying plainly and in the general, that those *Buds* may probably be formed, almost after the same manner, with *Cabbages* and *Loaf'd Lettuces*. Let us see then, whether we can unfold the Mystery of those, and thereby attain to the knowledge of the other.

To find how far this Comparison will hold, we must consider, that of the several Species of Plants, there are some which commonly do but shoot forth outwardly, that is, they

they only lengthen and extend their Extremities. Of this sort are such as either grow upright, for Instance, *Trees, Asparagus, Artichokes*; or such as creep upon the Ground, as *Melons, Gourds, Ivy*, and the like, &c. Others there are which for a while do only shoot inwardly, to get a firmer and more compacted Substance, till at last they take the same way with the former; for Instance, All such as are of an Orbicular Figure, as *Cabbages, Loaf'd Lettuces*, and even those *Plants* which are tied together to make them grow white, as *Chicorees, &c.* Those of the former kind shoot only at the Extremities of what was grown before; the others rarely shoot but only just round about their Center, in the same manner almost as we see Water springing up in the source of a Fountain.

Having premised this: I say, That as *Cabbage* and *Lettuces* cannot grow round when their Root is too vigorous; that excess of Vigor causing them to grow upright in their Stem as much as their strength will allow, and at last causing them to run up to Seed, when their strength is much exhausted; so likewise scarce any *Fruit-buds* can be produced on *Trees* or *Branches* too much invigorated by the *Sap*, that excess of it causing them to exert themselves in length instead of growing round, as it is necessary they should do to become really *Fruit-buds*.

A certain Mediocrity then of Vigor is requisite in those kinds of *Plants*, in order to their growing Round and Headed, as there must be a certain Mediocrity of *Sap* in *Fruit-Trees* to produce *Fruit-buds*.

Now to understand after what manner those Heads are framed in *Cabbages* and *Lettuces*, it is to be observed, First, That those outward Coats and Leaves are commonly first produced in those *Plants*, and have their Formation begun as soon as the *Plants* themselves. Secondly, That of all those Leaves first produced, there usually remain but few, which growing proportionably to the Dimensions of the *Cabbage* or *Lettuce*, serve for Ramparts and Balions to defend the Nobler Parts lying innermost, and which are, as it were, the Citadel or Magazine of the Place.

Hence it comes to pass, that some of those old outward Leaves, either by Instinct of Nature, or the *Gardiner's* Industry, contracting their Extremities very close to one another, do form a kind of Natural Girdle, or Cap as it were, which entirely covers and encloses the Heart and Inside of those *Plants*; which being the Seat of their Vital Principle, and assisted by the Action of the *Roots* which are produced by it, and resembling, as we have said already, the *Spring* of a *Fountain*, shoots continually from its whole Circumference an infinite number of small Productions, which become so many small Leaves.

Now these being confined, and hindered from spreading abroad, enfold and entangle themselves for a while one within another, till they grow strong enough to break open the Bars which restrain them in so narrow a compass, and violently to force their way out: And because they are not exposed to the Injuries of the Air, they remain tender, delicate, and white; as also being very numerous, and having but little room, they draw so close together, that at last they become a hard and solid Body. And this is what is called *Cabbages*, and *Loaf'd Lettuces*.

Now it is not improbable, but that *Fruit-buds* are formed just in the same manner as those *Headed Cabbages*. Without question 'tis partly the Frame and Figure which makes the difference of their Denominations. In *Trees*, that small, blackish, sharp-topped Roundness which both makes, and encloses the blossom, is more properly termed *Bud*, than *Head*; as in *Cabbage* and *Lettuce*, their bigness and roundness causes them to be more fitly styled *Heads*, than *Buds*.

I am of opinion, That *Onions* are formed within the Ground almost after the same manner as the *Heads of Cabbages* and *Lettuces* are upon the surface of it.

Now as those *Onions, Cabbages, and Lettuces*, when they are supplied with an additional increase of *Sap*, begin to disclose themselves, and to put forth that which they had a long time contained hidden within: Just so the *Fruit-buds*, having in the Spring received an inward Encrease, as well by Rarefaction of their former *Sap*, as their new Nourishment, burst out, and disclose at last that *Blossom* which carries in it the *Embryo*, or first beginning of the *Fruit*.

That first beginning of the *Fruit* is a very small Particle, enclosed in the Heart of the *Blossom*, wherein is contained the *Seed* from which the *Fruit* is produced; nor does either of them receive their Formation till the decreasing of the Heat, and descent of the *Sap* of the foregoing Summer. The temperate Warmth of the Spring assists the *Tree* in bringing to perfection what was but just begun, at once gratifying the *Gardiner* with the agreeable Object of his Hopes and Desires, and giving Nature an opportunity of multiplying its Productions.

Thus far I have been led by my Curiosity to make an Essay of enquiring into the inward Frame and Texture of *Fruit-Buds*, but I must confess ingenuously, That I have not made any considerable Progress, when I reflect upon that vast difference in their several Species in this respect, *viz.* That the Buds of *Stone-Fruits* have in them but one Blossom apiece, whereas the *Core-Fruit-Buds* enclose 10 or 12 together, not to mention the many other Distinctions in their Colour, Bigness, &c.

## C H A P. XIV.

*Reflections upon other Effects of the Sap relating to the Thickning and Lengthning of the Branches.*

I Come now to speak again of those Effects which owe their Being to the continuance of the Sap in some particular Parts of the *Trees*, and these are in my Opinion evidently demonstrated by the Instance of those *Willow-tops* that grow to an extraordinary bigness in comparison of their Trunk, which undoubtedly proceeds from hence, That their Top-branches being often Lopp'd off near the place of their shooting out, the Sap rising up to it in its usual course, cannot issue out so soon as it is arrived there, but is forced to tarry there for some time, and so sticking and incorporating it self in part to that place where it is stopp'd, it causes that Head to grow much bigger than all the rest of those Parts through which it only makes a quick Passage.

It may be said, and perhaps reasonably enough, that the Sap causes the bigness of the Branches in *Trees*, and the Leaves in all other *Plants*, almost in the same manner, as the melted Wax doth in *Tapers, Flambeaux and Torches*, with this difference only, (which yet doth not alter the Comparison) That the Sap rises up between the Wood and the Bark, aspiring to the Center of light Bodies; whereas on the contrary, the melted Wax runs downward along the suspended Wyck, because it tends to the Center of heavy Bodies: And if it happens that any of that melted Wax stays any longer in one part than in another, it will not fail of producing the same Effect that the Sap doth in the Extremities of *maimed Trees*. I cannot find any thing in *Mechanics* fitter to give a lively Representation, how Sap, though Liquid it self, can contribute to the thickning a Solid Body by that Solidity which it self acquires; for it really grows thick as it were, by so many Coats successively enfolded one over another, as is obvious enough to the Eye of him that doth but consider the extremity of any Stump of a *Tree*, or that views the Structure of *Onions, Radishes*, and other Roots, when cut through the middle.

But now as to the Extension of the Branches of *Trees*, and Leaves of every *Plant*; (which is made in this manner, *viz.* By the new Parts drawing nearer to the old ones, there is so close an Union made, and, to speak Philosophically, such an intimate and individual Incorporation, that it is impossible either to distinguish them by the Eye, or to unfold and separate them from one another.) I say then, as to this Extension of Branches, the new Sap must needs have in some measure the Propriety of mollifying and melting the hard Extremity of each Branch, and Trunk, of the former Year's Growth, that so it may unite the new Liquid with the old Solid, and constitute a Body altogether like, so as that the least difference cannot be perceived between them.

I must confess, this is a Point that seems to me worthy of the highest Admiration, nor has the utmost of Humane Industry ever yet attained to any Performance comparable to that Imperceptible Extension of Branches: For though the *Painters* Colours laid on at several times, and the Solder which *Goldsmiths and Founders* make use of, afford us some faint Resemblance of it; yet we must have Recourse to some other Effect of Nature, to give us a clear Idea of this so perfect an Union. For Instance; That of *Ice*, which by the sharpness of the Cold is formed over all sorts of Water, as we see it in the Basin of a Fountain. 'Tis true, the superficies of that Water which was Congealed to day, cannot absolutely be distinguished from the inner Parts of that Water which will be Congealed to morrow, and so successively from one Part to another, as the Cold continues to have a stronger Influence upon them: But the comparison of *Gutters* in which the Icicles grow longer, proportionably as the Cold of the Air becomes more intense, represents still more clearly, that lengthning of Branches which we can so difficultly solve in *Trees*, for to give an account how those Knots and Eyes come to be so artificially placed

placed at certain Distances, and to be so beautifully adorned with Leaves and Fruits, is beyond the Limits of our Understanding.

But however, neither of these Comparisons will signify much to us, unless there happen in the interval, from one day to another to be some abatement of Cold, so as it may certainly appear, that there has been some relenting of the Frost: For when that continues without any intermission, it has a like effect in the Water during the extremity of Winter, that the Sap has in the extended Branches during the Heats of the Spring and Summer. The only difficulty lies in the first Extension, which happens at the end of the Winter; and this arises from the stirring activity in the Liquid Sap, which rises up anew to the extremity of the hard and solid Branches of the preceding Year.

And here we may observe, That a Tree is easily to be cleft lengthways, *viz.* From the Head to the Foot, or from Foot to Head, as if in that Position the *Fibres*, of which its Trunk consists, were in some manner like Threads wrapped close one over another: But to take it breadthways or across from one side to the other, 'tis very difficult to cleave it. For the several Parts are so compacted and linked together, that each of them seems to make a little All, perfect and entire in it self, neither can any Separation be made of it, but by means of a sharp-edg'd Tool.

What Effects are produced by the continuance of the Sap, are yet more fully demonstrated by its contrary, namely by the too quick Passage of it, as it happens, (especially in any sort of *Fruit-Trees* whether *Core* or *Stone-Fruit*) when the Sap following its usual Course, which is to ascend by regular Steps to the extremities of the Branches, doth in its Passage open to it self an indirect and extraordinary way into some other part of the *Tree*, and in few days puts forth what we call *Suckers* or *False Shoots*. The Sap, I say, being thus disordered, and making its Escape with some sort of Violence, bursts out and rises with an impetuous force, and during that first Effort, makes no stay in its Passage.

From hence it comes to pass, that those Eyes which are nearest that breaking out are very far distant from one another, are flat and ill nourished, so as to be scarcely discernible: But when the violence of that first Effort is somewhat abated, the Sap returns to its ordinary pace, and seems to have its regular Pauses; whereby it both forms those Eyes nearer to each other, and affords them better Nourishment. So that while the lower Parts are accounted useless and false Wood, the upper on the contrary prove fruitful and well condition'd.

The Reader perhaps may think, I have insisted too long upon this Comparison between Sap and Light, but as I could not explain my Notion more briefly concerning that extrem quickness wherewith the Sap, after its being prepared by the Roots, seems as it were to fly to all the extremities of the Branches, so I wish that even thus I may have the good fortune to be understood.

## C H A P. XV.

*Reflections upon some other Effects proceeding from the greater or lesser Quantity of the Sap.*

I Shall now proceed to give another Instance, wherein a lighted *Torch* and the Roots of *Trees* have a mutual Analogy or Resemblance, for a further Confirmation of my Opinion, concerning the different Operation of the Roots in relation to the Sap, which causes the Thickening, Lengthening, and indeed the Universal Extension of the *Tree*.

For as a Luminous Body, the bigger and brighter it is, the farther will it diffuse its Light; just so those Roots that are thickest, hardest, and most vigorous in their Operation, do force up highest that Sap or Nourishment that is prepared by them.

And hence it is very easy to give a Reason how the Extremities of some *Trees* or *Branches* come to die, which certainly in my Opinion is nothing else but only the want of some of those substantial and strong Roots growing out of the foot of the *Tree*; whence consequently it happens, that there is not Sap enough prepared to rise up so high as it used to do, either in former Years, or even in that very Season wherein this Defect was observed.

For Instance: The Sap that in other Years used to rise 3 or 4 Fathoms, may now perhaps rise but 10 or 12 Feet, and of this you have a certain Indication when the new Branches shoot out no where but at a considerable distance below the Extremities of the old ones.

On

On the other hand, when the *Sap* in the beginning of the Year had advanced the Boughs 3 or 4 Feet in height, and yet towards the latter end of the Summer they begin to grow blackish, and at last to wither and die within 5 or 6 Inches of the Top; and this even when the *Root* seemed in the Spring to have sufficiently done its part, and the *Soil* to have been duly qualified with such a just proportion of Heat and Moisture as was requisite for their Vegetation: When this, I say, happens, it must be ascribed to no other Cause than the drying up of their Moisture by the excessive Heat of the Summer, in regard that their *Roots* being but small and weak, could not so well resist the Violence of it, as those which were more vigorous and substantial. What means are proper to be used for the preventing of such Accidents, I have already mentioned elsewhere.

Now since the more vigorous the *Root* is, the more vigorously also it will act, and consequently suck in more Nourishment, and cause that Nourishment to rise so much higher, it must undoubtedly follow, that the rising of the *Sap* to the Top of the Branches, whereby there is an Accession made to their former length, proceeds only from this vigour and strength of the *Root*; as on the other side, the weakness of the *Root* is the true cause that the *Sap*, not being in a sufficient quantity to rise to a considerable height, is confined much lower than its usual pitch.

And indeed it seems probable, that as all Animals are limited to such a determinate Size and Proportion, and, as a Fountain, containing such a quantity of Water, and conveyed by a Pipe of such a Capacity, cannot raise it up to a greater height than the Level of that Source from whence it flows.

In the very same manner the Dimensions of all Vegetables seem to be confined to a certain stint both of height and circumference, so as to have a fixed Point to which the *Sap* may ascend in order to the putting forth new Branches, but cannot possibly rise higher to cause any further Production. Thus if we Lop a *Tree* 5 or 6 Feet, whose usual height does not exceed 10 or 12, it will always appear vigorous and lively, till it have recovered its usual height of 12 Feet; and the Reason is, because it will be continually labouring to exert it self to the utmost Sphere of its Activity, and consequently there is no danger of its falling to Decay, or dying at the Extremities of its Branches.

It must therefore be the *Gardiner's* business to render himself expert in his Profession, by a diligent Observation of what is necessary to be done, both in the Ordering of his *Trees*, and the Manuring of the *Ground*; and indeed, the difference that is between a Fertile and Barren Soil, will assist him very much in the making a true Estimate of the Force and Vigour of the *Sap*. For in a Soil that is really good, a *Tree* will grow 30 or 35 Feet high, with a Circumference proportionable; but if the Soil be lank or barren, a *Tree*, though of the same Species, and as well Condition'd as the other, will not, perhaps, exceed 10 or 12 Feet. The former kind of Soil will prove fruitful in a manner without any Cultivation, but the latter will be good for nothing, if its Sterility be not supplied by the utmost Care and Assistance of the *Gardiner*.

## CHAP. XVI.

### Reflections upon the Order of the Branches shooting out of the Tree.

HAVING thus given my Opinion, how the *Sap*, after its entrance into the *Roots*, does afterwards rise up, and communicate it self to the upper Parts of the *Tree*, I shall now proceed to Explain in what manner the new Branches grow out of the Extremities of those of the precedent Year, and how it comes to pass that their Shooting out is generally so ordered by Nature, that the higher Branches have most commonly some Advantage both in their length and thickness over the lower.

And here I shall resume my former Comparison of a Brook, which having its Course retarded for some time by a *Digue* or *Dam*, is hindered from continuing its Progress to its designed Journey's end. This Water then, which we will suppose amass'd together in a considerable quantity, as we see in larger Ponds, coming afterwards to find divers Vents of equal Capacity, as well in the Body of the *Dam* which principally sustained its Pressure, as in the Walls built on each side of it, for the confining it within such a compass: This Water, I say, having either found or made these Breaches, will issue out at the same instant through all of them; but for the most part will run out in a much greater Stream, and with a stronger Current, at the

the breach of the *Dam* it self, than at the Crannies of the sides, and still faster in proportion, through those breaches which have an aperture nearest resembling that of the *Dam*, than through those which are more unlike. This so remarkable a difference is caus'd by the Pressure of the Water, halting continually towards its Centre, which Pressure still encreases the nearer it approaches to that Centre, as is obvious to the meanest Understanding.

The *Sap* produces almost the same effect in the Branches of *Trees*; for having found in them several Apertures of an equal bigness, which we call Eyes, it makes its way at the same time through those in the upper parts, but principally, and in greater abundance, through the last Eye, (That I mean, which is in the very Extremity of the Branch) and where the *Sap* makes its strongest Effort, than it does through the others which are at some distance. 'Tis true if there be such an exuberance of *Sap*, that the parts of it which ascended first are press'd forwards by the succeeding ones, it will then discharge it self into the lower Eyes, but always more plentifully into those which are nearest to the top of the Branch, than into those which are at a greater distance from it.

And as it falls out sometimes that a Stream enclosed by a *Dam* in the Front, and by Walls on each side, by striving to force its way out, happens to make a greater Eruption through one of its sides than through the *Dam* it self, so that the Water gushes out in great abundance, where in all probability one should have expected it in a lesser quantity. Just so we frequently Experience it in *Trees*, that the New Sprouts which shoot out at the Extremities of a Pruned Branch, instead of being bigger do oftentimes prove much less than any of those which at the same time grew out of it in other places.

Now, that I may give the best Reason I can of this Effect, which is so contrary to the Natural Course of the *Sap*, I conceive that this Alteration may proceed from hence, *viz.* The *Sap* endeavouring by its Natural Activity to make its Principal Passage through the Extremities of the Pruned Branch, is diverted by some Internal Cause which the *Gardiner* cannot always discover; and being prevented by this Obstacle from rising up in a full Stream to that Extremity, some part of it only can get through, but the more Spirituous and Active Particles of that Stream having insinuated themselves into some one of those Eyes which were next below the uppermost, begin there to exert their utmost Vigour, and communicate their Virtue to the remoter Eyes in greater or lesser quantity, according as they are more or less distant from that part of the Branch which serv'd as a Canal to Convey that Torrent of *Sap* to the Extremities of the Branches.

That little Portion of *Sap* which pass'd to the uppermost Eye or Eyes, having there produced Branches of but an indifferent bigness, communicates to them what it uses to do to all the weak Branches; namely a great Disposition to a quick Production of Fruit Buds. And upon this Account I take a particular Care in the Pruning my *Trees*, of this Branch, as of the greatest value and importance to be preserved for the raising of Fruit.

I must confess it is a difficulty which neither my long Study, nor diligent Observation have been able to Solve, how this *Sap* in proportion to its greater or lesser Quantity should produce such different Effects. That it does so is very evident, and thence it was that I laid down this Paradox, That the Fruit is a Symptom of the Branches weakness; but the manner how, or the reason why this comes to be so, I have not yet been able to comprehend.

Neither do I find it less Difficult to give an Account how Soil comes to decay and grow Barren, by bearing those Plants which are not of its Native Growth, such as Corn, Trees, Pulse, &c. but will not become lank or exhaulted by a plentiful Production of Thistles, Nettles, and many other Weeds.

After all these Observations, I think I may safely aver, that in all that Infinite variety of Speculations that serve for the Entertainment of our Intellectual Faculties, there is not perhaps any Subject more Nice and Intricate to adjust rightly than that of *Vegetation*. 'Tis, I confess, a Field of very large Extent, and open to all the World, where every one has free liberty to enter and make what researches he pleases, though very few have had the good Fortune to succeed in the attempt. So many are the particular differences that perplex it, that nothing is so easy or so common as to fall into great mistakes about it, when we pretend from our Observations upon one Plant, to make Inferences concerning another; and from thence proceed to lay down several Conclusions and General Maxims.

## C H A P. XVII.

*Reflections upon the different Effects of the Sap in the Outward Parts of the Plants.*

Though it be very probable that the Formation of the Roots, and Nourishment of all Plants, so far as it is tranſacted under Ground, is performed by Nature in the ſame manner, as I have formerly explain'd it in the Ch. of Plants. Yet as to their outward Appearance, they may not unſitly be compared to ſo many little Republicks, each of them differing from the other in their Government, and having nothing in their manner of Acting common with their Neighbours, but the Poſity of the one being pretty often quite contrary to that of the other. Thus we ſee, for inſtance, that Birds, though they all agree in the way of Multiplying their Species, viz. by Eggs, do notwithstanding differ in their bigness and colour, in their Note, their way of Living, Acting, &c.

Nature has Impreſs'd ſo great a diversity in all *Vegetables*, as if ſhe had deſign'd as well to make us admire that Inexhausted Stock of Variety in her Productions, as to confound and dazle the Underſtanding of Mankind, when it preſumes to Dive into the Myſteries of her Workmanſhip, and pretends to give Reaſons for the abſtruſteſt of her Operations.

There have been in all Ages ſome very Ingenious Perſons, who have made it their buſineſs to become knowing in this Faculty; and even at this preſent time we ſee many that Study it with extraordinary Application. But the Miſfortune is, that if we happen to make any, though but an inconfiderable Diſcovery, into the Nature of ſome one *Vegetable*, beyond the Medicinal Properties of it, we are preſently too apt to flatter our ſelves with a belief, that we have attain'd to a perfect Underſtanding of it both in the Cauſe, and Manner, of its Being, and from thence make no ſcruple to infer Concluſions concerning others alſo; whereas if we look into the Matter but a little further, there will immediately occur to us ſo many Plants of a quite contrary Nature, as are more than enough to confound our Judgments, and deſtroy our Hypotheſis, or at leaſt to give a fatal blow to the greateſt part of what we pretend to lay down as Univerſal Maxims.

For inſtance, if we conſider the proceſs of Maturation, or what part it is that grows Riſe ſoonest in *Pears, Apples, Grapes, &c.* As likewiſe if we do but obſerve the order of Production in the Flowers of the *Tuberuſe, Lilly, Hyacinth, Larkſ-foot, &c.* viz. which of their Buds come to be firſt blown, we ſhall certainly find that both in thoſe Fruits and Flowers, that part which is next to the Stalk, and ſo to the Bole and Roots, and which conſequently doth firſt receive its Being and Formation, doth alſo get the advantage of Priority in Ripening and Blowing. Which Ripeneſs as it is, with relation to Mans Uſe, the higheſt degree of its Perfection, ſo in reſpect to the duration of the Fruit or Flower, it is the neareſt ſtep to its Deſtruction. This Conſideration, I ſay, is enough to encline one, to lay down this as a General Rule, That in all Plants, the nearer any Part is to that Place from whence it receives its Nourishment, ſo much ſooner doth that Part arrive to its Maturity and Perfection.

But how ill grounded this Aſſertion would be, is ſufficiently Demonſtrated by what we continually ſee in *Figs, Melons, Peaches, Plums, Abricots, &c.* namely that the beſt part, and which Ripens ſoonest, is furtheſt from the Stalk, and conſequently that which is at the greateſt diſtance both from the Bole and Roots.

In *Orange-Trees, Jeſſamines, Pinky, Muſk Roſes, &c.* the Buds that Flower firſt, are thoſe Growing at the Extremities of the Branches; and indeed, there needs no more to the putting our Naturaliſt to an Abſolute *Non plus*, than only to bid him conſider the Nature of the *Raſberry* and *Roſe-Larrel Trees*, neither of which keep any conſtant order either in the Ripening of their Fruit or Blowing of their Bud; for ſometimes that which is furtheſt off Ripens or Blows firſt, and ſometimes that which is neareſt. This unequal, or rather diſorderly way of acting, cannot without extream difficulty be fix'd or ſtated by any General Maxims.

Thus then we ſee, that inſtead of laying down one General Aphoriſm concerning the order of Nature in the Ripening of Fruit, and Blowing of Flower Buds, we muſt deliver as many different Maxims as there are different Species of Fruits and Flowers upon the whole Face of the Univerſe.

Again,

Again, if in the Spring we Examine what Branch it is out of which moſt Fruit, Grows, as *Pears, Apples, Peaches, Plums, Abricots, Cherries, Goſberries, &c.* it will appear to be upon the Boughs of at leaſt one or two years former Growth, for here it was that the *Fruit-Buds* did upon the fall of the *Sap* in the preceding Summer receive their firſt Formation.

Now having gain'd this Point of Knowledge, we are tempted to infer from thence that all Bloſſoms have their Being a long time before the Fruit, but then on the other ſide, let us but look upon the *Vine, the Walnut-Tree, the Great Cheſnut, the Quince-Tree, the Raſberry-Buſh, &c.* and we ſhall ſee that in theſe Nature has Acted in a quite different manner than ſhe uſually doth in other *Trees*: For in thoſe I have now mentioned, the Bloſſoms precede the Fruit but a very few days, ſince both the Bloſſoms and the Fruit Grow only upon ſuch Branches as were put forth themſelves but that very Spring, and are almoſt Contemporaries in their Birth with the Bough it ſelf that is to ſupport them. However there is this difference between them, That ſome Fruits are form'd at the very extremity of the Bough, as *Walnuts, Cheſnuts, Quinces*, and theſe for the moſt part do entirely put a ſtop to the Branches Growing any further, except only that on the *Walnut* and *Cheſnut-Trees*, we ſee ſometimes that after the *Nuts* have received their formation at the top of the Bough, there will yet riſe *Sap* enough to make it grow conſiderably longer. Other Fruits there are which are produced on the lower part of the Branch, and theſe never hinder the Extension or Lengthning of it, as the *Grape, the Mulberry, &c.* Thus we ſee what a mighty difference there is in the manner of the Production of ſeveral Fruits.

If we look, in the latter end of *Autumn*, upon that part of the Branch which is firſt tripp'd of its Leaves, it will preſently appear that in moſt *Trees* it is the Top that firſt ſhews it ſelf bare, as if the *Roots* not being then ſo vigorous in their Action, or the Heat of the *Air* not ſtrong enough to ſupply their Neceſſities, the *Sap* thereupon became incapable of riſing to its uſual height; but now on the contrary in *Peaſe, Beans, Artichokes, Cabbage*, and moſt ſorts of *Puſſe* or *Legumes*; as alſo in *Almond* and *Peach-Trees*, that are very vigorous and thriving; we find the lower part is firſt dried and decayed, whiſt at the ſame time the Top continues its Verdure, and Shooting forth. Can any thing be more irreconcilable than theſe two effects of *Sap* ſo contrary one to another?

In all *Trees* whether of Stone or Kernel Fruit, Ocular Experience tells us that the Fruit grows always juſt in the ſame place where its Bloſſom grew, as if the Bloſſom in its Exit or falling off ſeem'd only to give way to the coming of the Fruit, for whoſe ſake it was blown; but now in *Walnut-Trees, Cheſnuts* and *Haſtnuts*, as alſo in *Turky Wheat, &c.* we find no Fruit where the Bloſſoms were, ſo far rather to the contrary, that in thoſe *Trees* the Fruit is produced at the very end of the Branch where not one Bloſſom appear'd, and in *Turky Wheat*, the Bloſſom is form'd at the Top of the Stalk, and the Seed grows out from the very middle of each of the lower Leaves.

As to the order or proceſs of Nature in the Production of Fruits, the firſt beginning of it is made by the *Fruit-buds*, and as we have ſaid already concerning *Kernel-Trees*, every Bud contains in it ſeveral Bloſſoms, and conſequently ſeveral Fruits alſo; as in *Stone Fruit-Trees* every Bud contains but one Bloſſom, and therefore but one ſingle Fruit. In the miſt of every one of theſe Bloſſoms, there is a little Sting or Active Particle, from which within three or four days after Blowing the Fruit is form'd if the Weather prove favourable; that is, if the Rigor of the Cold do not deſtroy theſe precious Embryo's or Beginnings; ſo that ordinarily every Species of Fruit is Uſher'd in by its Bloſſom. But here we muſt except the *Fig*, which is produced entirely, and all at once, without any Bloſſom; and in *Melons, Cucumbers, Gourds, &c.* the Fruit it ſelf appears before the Bloſſom, for it is not till ſome days after the Production of the *Melon*, that the Bloſſom which grows out of the Top of it receives its compleat Formation, and afterwards proceeds to Blowing. 'Tis upon the thriving of this Bloſſom that the Perfection of the Fruit depends; ſo that if that prove unable to reſiſt the Cold, and all its other Enemies, the Fruit will dye almoſt as ſoon as it is Born.

It is further obſervable, that though for the moſt part there remaineth nothing of the Bloſſom with the Fruit, ſo that this is not wont to appear before the Bloſſom is entirely gone, yet notwithstanding we find that in the *Pomegranate* there is left ſome part of the Bloſſom which goes to the Conſtruction or Composition of it; unleſs you will ſay rather that part of the Fruit grows at the ſame time with the Bloſſom

and

and is to it, if I may use the Comparison, like a Cradle or Shell, and this as well for the preservation of it, as to serve for a cover both to that sort of congealed Liquor, and to the Grains or Kernels which are the very Essence and Substance of this Fruit.

In an Acorn the first thing that appears is a kind of Shell or Husk, of a Figure between round and flat, that shews it self about the latter end of *July*, and which we may say serves in stead of a Blossom to it, since indeed it has no other: and out of the middle of this Husk the Acorn it self grows, which Tradition tells us was the principal Food of Mankind in the Primitive Ages of the World.

Now as every Tree is composed of several Branches, some strong and others weak, if we examine the place whereon ordinarily the Fruit grows, we find that Nature has indoltriously chosen to fructify upon the weaker, and not upon the stronger Branches.

But now in Vines and Fig-Trees it is just the contrary, for it is generally seen that Grapes and Figs very rarely grow upon the weak Branches, but are in great plenty upon those that be thicker, stronger and more vigorous. How then is it possible to reduce to one Maxim this inconsistency of Nature in chusing such different Situations for the Production of Fruit?

If we consider after what manner Trees are extended in length both in their Trunk and Branches, we find this remarkable Circumstance, namely, that in the Spring and Summer whilst the Sap acts most briskly, that which was the Top or Extremity of a Branch this moment, ceases to be so the next; by reason that the Sap ascending continually without intermission, still puts out new Leaves above the precedent extremity; and the new shoot receives the same Treatment from the succeeding Sap, that it gave to that extremity of the Branch which immediately preceded it.

But on the contrary in Artichokes, Asparagus, Grapes, in all Leafs, and Fruits, in Tulips, Pinks, and most sorts of Flowers, we see that what was once the extreme part, always continues so, so that their Augmentation or Growth is only inward, and not form'd outwardly, as Experience shews us it is in Trees. The Asparagus, Artichoke, Tulip and most sorts of Flowers appear plainly to grow entirely, though but in small Threads or Filaments, out of the very substance or heart of the Plant, and afterwards encrease in thickness in the inside of it by the assistance or supply of the Adventitious Nourishment. So that if we consider by what small and almost imperceptible degrees they rise up from their Stalk, and are push'd up by the new Sap, it seems to have some resemblance in the manner of its growth with a Syringe, where the Sucker is thrust through the exterior Tube till it come out through the Top of it.

Again, If we consider what it is that causes the whiteness and delicacy of tyed Lettuce, Celeri, the Spanish or White Thistle, the Leek, &c. it will appear to be either from their having been cover'd with dry Dung, dry Leaves, Earth or Mould, whereby they are hindred from receiving the usual freshness and virtue of the open Air.

Hence it comes to pass, that the parts thus covered being no longer penetrated by the Sun-beams, do not only lose, together with their beautiful Green colour, whatever they had of toughness, or of a bitter unpleasant taste; but also acquire a certain whiteness, accompanied with that agreeable and delicate Relish for which they are so much esteem'd. But in Asparagus the case is quite otherwise, for in that we find those parts the toughest and most ungrateful to the Palate which by their being deprived of the Suns immediate preference, by the Mould or Dung that covered them, were become perfectly white: Whereas on the contrary the best and sweetest parts are those which are Green and Reddish. This in my Opinion is an inexplicable difficulty, that the being exposed to the Air should make some Plants tender, and others tough and hard at the same instant.

Daisies and Gilliflowers are for some time white, but a little after, the Sun by degrees changes them from White, into the most beautiful Red in the World.

In Pinks and Tulips, that Vivid Red which adorns them in their first blowing, forsakes them after the Sun has shin'd upon them for some time.

Most sorts of Pears are coloured in the Blossom, and afterwards become Green, Grey, White or Yellow, and some of them towards the latter end, when they are near ripening, resume a more lively Red than ever they had before.

Apricocks, as they advance nearer to Maturity, change from Green to White, and from thence turn to an admirable Vermillion.

The Suns Influence makes early Peaches white, Mulberries black, Cherries, Strawberries, Raspberries, &c. of an Orient redness, most kinds of Peaches of a Purple colour: In short, it gives an incredible variety of Tinctures, both to Plums and other Fruits, as well as to all sorts of Flowers. You see here how many Instances I have given of very material Differences.

Now for the Leaves of Plants and Trees, we commonly find but one upon a Stalk, and they grow upon the Boughs Chequerwise, in little Stories or Steps at a small distance from each other. But nevertheless in some Trees we find growing upon one Stalk, three, five, or seven Leaves: as in the Elder, Walnut, and Rose-Lawrel-Tree; upon others seven, nine, or eleven, as in the Ash-Tree: Nay, upon others to the number of seventeen, nineteen, and twenty one, as in the Acacia; but always with an odd Number. And it is observable, that when so many Leaves are found upon one Stalk, they never grow in Stories or Chequer'd, as I just now affirm'd, but are diametrically opposite one to another.

In Mulberry-Trees we see that in *May*, out of every Eye or Bud that was upon the Branches of the precedent Year, there grow ordinarily four or five Mulberries: Nay, sometimes there appears a new Shoot, which is either longer or shorter in proportion to the quantity of Sap that was convey'd to the Bud from whence it sprung.

In Fig-Trees, out of the Navel or midst of every Leaf coming between the beginning of the Spring and the middle of *June*, (which is about the time of the Summers *Solstice*, and consequently of the greatest Exuberance of the Sap) there constantly grows a Fig at *Autumn*, of that kind we call second Figs: But the number of them in our Climate does not exceed five or six, or seven at most, and that upon every good Branch only.

I lay upon every good Branch only, because all Branches have not the advantage of being so: For instance, such as are weak, and those great Suckers that rise out of the foot of the Tree, with all that sprout from the extremity of the pruned Stock: And lastly, even those great Boughs, or false Shoots rather, that grow out of the Trunk of the Tree, must not come under that Denomination. So that indeed none are to be esteem'd good Branches but such as at their first shooting are of a due bigness, and following the Natural Order of Production in all Branches; concerning which we have already discoursed in another place.

Those Figs which are usually called Figs of the first Sap, begin to appear about the middle of *April*, and grow on a sudden to an indifferent bigness before the putting forth yet of any Leaves: The Seat where they grow is that very point or place where those Leaves were put forth the Summer before that had not produc'd any of those above-mention'd second Figs, which use to be ripe at *Autumn*. These Figs of the first Sap seldom fail of being ripe at the latter end of *July*, or in *August*, if the cold do not happen to pinch them, and make them fall: Or if during the Summer they escape being spoiled by violent Rains or excess of Heat: As for the Figs of the second Sap, there is no hope of their coming to perfection, except in those which being put forth by Mid-*June*, were come almost to their full bigness before the end of *July*; and even then it must be in a hot and dry Soil, and when it proves a favourable *Autumn*, and free from Frosts, and cold Rains, as it was in the Years 1670, and 1676.

Neither are Figs the only Fruits that are formed out of the Navel or Middle of their Leaf, since it is no more than what is common to them with many others, particularly to the Acorn and Jafmin: Grapes indeed grow in a quite contrary fashion, viz. upon the Reverse or Back-side of the Leaf: which is very strange and singular. Nor is it less remarkable, that in most Vines they grow commonly but at the third, fourth, or fifth Knot, which is at the lower part of the Branch; whereas all other Fruits are born throughout the whole length of that Branch, which we call the Fruit-Branch, and in greater plenty toward the Top than Bottom of it.

Quinces bear almost in the same manner with Raspberries, Azzeroliers, and Pomegranates, viz. at the end of the small Branches sprouting from the Great Ones in *March* and *April*: But if a Pear-Tree be grafted upon a Quince, it beareth only upon those Branches that are of a Year or two's growth.

In all Plants the greatest part of the Sap, as I have often said, commonly rises up between the Bark and the Tree; and perhaps some of it may ascend through the Wood it self: But in the Vine, which to speak properly has no Bark, the Sap evidently rises through the Substance or Body of the Tree.

The increasing of the Fruit in bigness, is caused by its Nourishment or Sap, which being convey'd from the Branch by the Stalk, as through a Pipe, into the Fruit between the Skin or Paring, and the Pulp, is there reduced to a thicker, and more solid Consistence conformably to its respective Nature. And probably both the Wood of the Tree, and Stalk of the Fruit receive their Increase in Bulk much after the same manner.

Nature has observed this Order in her Productions, that generally the fairest Fruit grows upon the Top of the Bough, that the weakest Boughs are most fruitful in bearing, and that they bear but once a year. In *Fig-Trees* the doth not keep to this Rule: For *First*, The *Fig-Tree* bears Fruit twice a year. *Secondly*, It bears only upon the bigger Branches, so that (in *Autumn* particularly) those *Fig-Trees* bears only, that are old enough to be of a sufficient Strength and Vigor. *Thirdly*, The earliest and largest Figs grow farthest from the Top, the others in proportion to their greater or lesser Distance from it, advance more or less in their Forwardness and Bigness, and commonly they follow the same Order of Succession in their Ripening, that they did at their first growing.

The manner of the *Indian Fig-Tree's* bearing its Fruit without the Support of any Trunk or Branches, and making use of its Leaves only to multiply and grow upon, is, in my Opinion, as surprising a *Phænomenon* as any of those Objects which daily attract our Admiration.

Ordinarily most of our Plants are some time in the Blossom before they run up to Seed. But *Purslain* runs to Seed almost without any Blossom at all: For as soon as the Stem is grown to a sufficient Bigness, it begins to rise up in several Stalks, all of them separated from each other, and produces a Seed, which at first is white and tender. This Seed, which is contained in little Pods, as it ripens, becomes black and hard, and then the Pods opening themselves, discover the little Treasure included in them, which before they had so carefully conceal'd.

The Difference of Colours in Fruit Blossoms, is very remarkable. *Pears*, *Almonds*, *Cherries*, and *Orange-Trees* have a White Blossom: *Apple-Trees* a Red, *Pomegranates* an Orange-colour, and *Peach-Trees* a light Purple; and of these Blossoms, some are double, some single; some great, some middle-sized, and others very small. That indented, or jagged Figure wherewith Nature has wantonly adorned most sorts of Vegetables, and which by its different Cut or Edging, in every Species, gave Mankind the first Hint that hath since furnish'd him with so many Varieties: This Artificial, and Curious Edging, may very well deserve some Place in our Philosophical Meditations.

If we consider the Circumstances attending the Bulbs of *Tulips*, we cannot but acknowledge that Philosophy has not yet been able to give us a satisfactory Account of them. They are put into the Ground in *October*, and there take Root, and in *March* following, each of them puts out a Stalk, in order to Budding, and Blossoming in due time. Hitherto you will say, there is nothing extraordinary, since the same thing is always seen in the *Imperial Crown*, the *Hyacinth*, *Tuberose*, *Jasquil*, &c. but here then lies the Wonder, that this *Tulip-Stalk*, which grew manifestly out of the very Middle, or Center of the Bulb, just as the Stalk usually grows out of the Middle in all other Bulbs, is at length remov'd from its first Seat, *viz.* the Center, to the Outside, or Superficies of its Bulb; a peculiar Case which happens not to any other Plant. Now who is it that can solve the Difficulty how this Transposition is brought to pass? Does the Bulb force it back again? Or does it by a sort of *Leger de main* in its Ascent, penetrate the sides of the Bulb? This indeed is a Mystery in Vegetation that can never be look'd upon with sufficient Astonishment and Admiration.

It would be an endless Labour, should I particularize all my Observations of this kind in Vegetables: But these are sufficient to demonstrate, that every Plant has a peculiar, determinate, certain, and infallible Stint or Term, for the Beginning and Duration of its Action, for the Manner of its Appearance above Ground, for the Quality of its Soil, for the Taste, Colour, and Use of its Fruit, for the Figure, Bigness, and Colour of the Seed, the Difference of its Leaves and Stalk, or for the Parts of the Tree where the Fruit and the Seed grows. And though, as I have said divers times, it be very difficult to explain all these peculiar Differences by the Distance of Pores, the different Configuration of Parts, or Atoms of a Figure, justly proportioned for the Penetration of them.

I shall here, notwithstanding, conclude this Subject at present, after I have given the Reader my Thoughts concerning due Circulation of the Sap, which some pretend to have discover'd in Plants.

C H A P.

## C H A P. XVIII.

Reflections upon their Opinion that maintains the Circulation of the Sap.

AS I am of Opinion, *First*, That there is in the *Spring*, a certain Rarefaction in all Vegetables, which is the first Mover in Vegetation. And *Secondly*, That there is in every Plant a Vital Principle, which being a necessary Agent, receives the first Effects of that Rarefaction, as I have already discours'd elsewhere. So I cannot think of any Comparison fitter, to make my Notion intelligible, than that of a Clock, which needs no more to set it going, than only to pull up the Weight, and give a little Jog to the Pendulum. — The Truth is, I always thought it absolutely impossible to make this pretended Circulation consistent with the Action of the Roots, which we daily see to extend themselves both in Length and Thickness at the very same Instant that they receive their Nourishment. And the Objections that prevail'd with me, were these.

*First*, I cannot apprehend either at what time, or in what Place this Circulation should begin. *Secondly*, I cannot see either any Necessity, or Advantage of it. *Thirdly*, Supposing we should admit it, I am in the dark, whether we must allow one general Circulation only in every Tree, or whether there must be as many Circulations, as there are particular Branches, &c.

As for the Time when it begins, if there be such a Circulation, it must certainly have its Beginning the very same Instant that the Roots begin their Action, and also must owe that very Beginning to the Influence and Virtue of the Roots; so that consequently there may be a Time when there will be no Circulation, for as much as the Roots are not continually in Action. Now, as the principal Reason of admitting this *Hypothesis* of Circulation in Animals is drawn from the Necessity of it, *viz.* for the Purifying the Blood, which, we are told, would be in great Danger of being corrupted, if not kept in continual Motion: So if that Instance hold in Plants, it must then also follow, that the Sap would be in the like Danger of Corruption, that very first Moment of its Circulations being intermitted; and consequently we should see a general Mortality of all those Trees that should happen not to be in Action; whatever the Cause of it might be, whether their being hinder'd by the Frost, or their lying out of the Ground; and much more, that all Branches, when once separated from the Tree that bare them, must immediately perish; just as the Members, as soon as they are cut off from the Body. But now there is nothing more contrary to the Experience of every one, than this will, as appears evidently by that infinite Number of Plants, and Grafts, which are so frequently, and with such good Success, sent into foreign Countries, without the least ill Accident, provided they be not overmuch dry'd by excess of Heat.

But supposing there be really such a Circulation, and that it commences at the same time with the Action of the Roots: Yet how will they be able to solve the Production of those Branches which shoot forth in the Spring, without any Dependence upon the Roots. That it is so, there can be no doubt, since we have Instances of it every Spring in Trees newly planted, and which have not yet put forth any new Roots. As also in Trees digg'd up in the Winter, and left lying on the Ground, and even Branches lopp'd off in that Season, and set up an end in the Ground, will put out little Shoots in the Spring.

In fine, How is it possible to give a clear Account of this Circulation, when we find that Almonds, Nuts, and even common Seeds, shoot out within the Earth, and in a few days put forth a Root, growing in length downward, but do not cause any Production to rise up out of the Ground? When we see that the Bulb of the *Imperial* will send out Roots in *August*, but no Stalk; and on the contrary, other Bulbs put out Stalks in the *Autumn* and *Spring*, but no Roots; when *Tulips*, *Tuberose's*, and especially the *Asparagus*, grow upright in such a manner, as that which was the extrem Part at its first Appearance, still continues so, and that all of it rises entirely and at once from the Bottom to the Top; when the Sprouts shooting out from the Extremity of a Branch, which has been cut or crop'd, have such an extravagant difference in Length and Thickness, as I have formerly describ'd. It is, I think, sufficiently clear from hence, that there is a very unequal Distribution made of the Sap; seeing that the Fruit-buds are form'd only upon the Top of the weak Branches, and grow only at the Bottom of the Strong. I must confess, it seems a

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very difficult Task to me, to prove a Circulation in all these, and an infinite Number of other Examples, that I could produce upon this Occasion.

If we can prove therefore that there is no Circulation in some Plants, I see no reason why we may not positively conclude against the Admission of it in others.

But to give a further Demonstration of the Impossibility of this Circulation, let us but consider, that upon the Admission of it, we must suppose in every Branch, three distinct, and separate Passages, *viz.* two for the going, and returning of the imperfect *Sap*, and a third for the return of it when it is arriv'd at its Perfection, namely, to convey it to that Place where it is to make its Residence. I do not say there must be Passages for its *Rising* and *Descending*, because it happens very frequently, that the Branches hang downward, and Fruit-Branches generally grow in that Posture; so that to speak properly, we cannot say that the *Sap Ascends*, when really it *Descends*; and for this Reason I chose rather to say barely, that the *Sap* will need several *Ways* or *Passages* for the Conveyance of it in its going and return.

For Instance, I desire to know where they will find these three distinct Passages in a Cherry-Stalk, or how the *Sap*, which in its first Motion, should have risen to the Extremity, or Top, and then return'd back immediately down to the Roots: how I say it should be determin'd by Nature, to descend to the Cherry, which hangs down, and afterwards re-ascend to that Place, where it turn'd out of the way that lead it upward, and from thence fall into that Path which was to convey it to the Root, and at last re-conduct it to the Place where it is finally lodg'd, to supply the Exigencies of the Fruit and Leaves.

I would ask further, Whether or no there be not a Circulation of *Sap* in the Fruit, as well as in the Tree; if so, then these two *Saps*, must, in their Return, have each of them their particular Way (which will cause a great Multiplication of Ways) or else they must necessarily mix together, and then would ensue an unlucky Confusion of the two *Saps*, one of which is affirm'd, by them, to be much Purer and Nobler than the other.

According to this *Hypothesis*, the *Sap* must make a great many Journeys backward and forward, which is a thing very disagreeable to Nature, who affects to be plain and simple in all her Operations. Why therefore may we not rather say, that the *Sap* acquires its Perfection that very Moment in which it arrives at the Roots; just as the Air is illuminated in every part, immediately upon the Sun's beginning to appear above the *Horizon*? But further, admitting that this Circulation were necessary for perfecting the *Sap*, I would fain be satisfy'd where it is that the *Sap* receives this Perfection. It cannot be at its first entrance into the Roots, because, according to the Principles of our Antagonists, it is there but in an imperfect and indigested State; neither can it be when it is arriv'd at the Extremities of the Boughs, or Fruit, seeing it doth not continue there, but has yet two Stages to travel further; for if it take up its Rest in those Extremities, it must then follow, that it was come to its compleat Perfection, and consequently would have no need of returning to its first Source. Neither can it be said to be thus perfect at its second coming into the Roots, because then certainly it would take up its final Residence with them; for since it is indifferent to the *Sap*, when it is once perfectly digested, whether it be employed in the Formation of the Roots, Trunk, or Branches, Leaves or Fruits; it would undoubtedly fix it self in the very first Place, where it should find it self qualified with all the Degrees of Perfection requisite to its Nature.

Again, Supposing that the Extremity, or Top of the Branch, to which the *Sap* was to have risen, were cut off, I desire to know in what manner this Communication of Ways, and turning out of the one into the other, could be solv'd, and what would become of the *Sap* design'd to have been made into Fruit, if it should be stopp'd in the midst of the Way, before it could arrive at its Journey's End.

It cannot be deny'd that this Doctrine of Circulation, draws an infinite Number of Inconveniencies along with it, which, in my Judgment, can be prevented no other way, but by the following Account of the Process of the *Sap* in Vegetation, *viz.* That the Vital Principle, which is the *First Mover* in the Action of the Plant, being invigorated by the Warmth of the Sun, immediately communicates to that Moisture, which was attracted by the Roots, such a Quality as is necessary to the making of it perfect *Sap*, which nevertheless is not determin'd in its own Nature, to any particular Production, but may indifferently become either Fruit, Leaves, or Trunk; and as that *Sap* has all the Degrees of Rarefaction that are requisite for

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it, it must necessarily be a light and subtil Body, and consequently extremely adapted to rise up to all the Extremities of the Branches. Where it is very plentiful, it exerts it self, in producing a great Number of Boughs, and Leaves, all of them bearing a Size proportionable to the abundance of the ascending *Sap*: If it ascend but in a very small Quantity, it is employ'd in bearing an infinite Number of Blossoms, and good store of Fruit, though it will be but small in its Dimensions. And lastly, where the *Sap* rises in a moderate Proportion in some certain Places, as either upon the Top of the weak Branches, or the lower part of the Strong, it there signalizes it self in the Productions of Buds, and of large and beautiful Fruit.

But now to give a clear and rational Account of this admirable Distribution of the *Sap* unto every part of the Tree, either for the Beginning, Continuing, or Compleating, and Determining it in its just Bigness and Proportion, is a Work above Humane Performance. Nature seems expressly to have deny'd us that Privilege, as if she had seem'd indifferently to hide from us, under a thick Veil, the Manner, both of her Conception and Production; so that hitherto, our ordinary Faculties have not been able to fathom this mysterious Subject of Vegetation.

I will not deny but that there is a Circulation of the Blood in all Animals; forasmuch as the Vessels with their Extremities and Insertions, and indeed the whole Structure of their Body is so exactly entire, and perfect in all its Extent, as that we cannot conceive an abrupt Beginning or End of them. Hence it is that they are so excellently fitted for the Reception of the Blood and Spirits, and restraining them from issuing out at any Extremity. But in Trees, whose encreasing in length is continually form'd outwardly, we must suppose the Vessels to be open at their Extremities, and that they receive their Augmentation in length, on their Outside, as the whole Mass of the Tree doth; so that there is no Analogy between the Vessels in the Body of an Animal, and those in a Tree, and consequently the Inference deduced from that Comparison, must needs be erroneous.

The third Question, wherein I desire to be satisfy'd, *viz.* Whether, upon supposition that there be such a Circulation, we must say that there is but one general Circulation in each respective Tree, or else that there are as many particular Circulations as there are Branches, is perhaps as difficult to resolve as any. For if we admit but one in general, we shall be hard put to it to give an Account how a Slip set in the Ground, comes to take, so as in a short time to become a perfect Tree. We must be forc'd to say, that in every one of these Branches there was a true Circulation, which ceas'd from Action as soon as they were cut off from the Tree upon which they grew; but that as soon as by their Re-plantation they were restor'd to a Condition of Acting of themselves, their Circulation also began to resume its Action; and by these Steps they came to be perfect Trees.

If therefore, to give a Reason for this Growth of Slips, we must admit of a particular Circulation in every Branch, we must likewise be forc'd to admit of many Circulations in every Branch. For since any Branch may be divided into several Parts, if every one of these Parts be set in the Ground, with all the due Circumstances belonging to them, they will as easily take to grow, as if they had been entire Branches. But this Solution will draw us into a *Progressus in infinitum*, than which, in Ratiocination, nothing can be more absurd.

Thus, when a Layer of a Vine being put into the Ground, takes a new Root, and thereupon that Part of the Layer next to the Earth, which before was the smallest, becomes in a little time thicker than the Part next adjoining to the Tree: Must we not of necessity have recourse to a new Circulation, since the former seems plainly to be at an end, or at least to have become altogether useless? I must confess, I cannot find any Expedient of adjusting all these particular Circulations, with the general one, to make them act in Conformity with, and Subordination to it, when they are all together in the same Tree at the same time.

Such a Cloud of Difficulties and Inconveniencies have prevail'd with me not to give any Credit to this new Opinion of the Circulation of the *Sap*, though I have at the same time an extreme Veneration for those Worthy and Learned Persons, who are the Authors of it.

## C H A P. XIX.

*Reflections upon the Opinion that maintains the Conveyance of the Nourishment through the upper parts of the Plant.*

There have been some of Opinion that the Nourishment of the Tree is not only derived to it through the *Pores*, and by the Operation of the *Roots* in the Earth, but that there is likewise some Contribution of maintenance afforded by the Air, and subtilly conveyed to it through the upper parts of the Tree. This Opinion of theirs is grounded upon this Observation, That if you make a very strait ligature round any *Branch*, or even if you strip the *Bark* off it, the *Boughs* that are below that part so tyed or stripp'd, will notwithstanding encrease both in length and thickness.

But to this I Answer, First, That in some *Vegetables*, viz. In *Almonds*, and *Stones of Fruit*, as also in ordinary *Seeds*, there is no Necessity for this Aerial Nourishment, since the whole Series of their *Vegetation* is performed in the Bowels of the Earth without having the least Communication with the Air.

Secondly, I Answer that it is impossible to tie any *Branch* so straitly as that the *Sap* (a Liquor not only very subtil and delicate, but also very Impetuous in its Operation) shall not insinuate it self, and find some passage through; for tho' the main stream of the *Sap* rises up between the *Bark* and the *Tree*, yet it is certain that some little quantity doth constantly penetrate through the *Fibres* of the solid *Wood*, neither is it any Wonder if Nature, who out of her great abhorrence of a *Vacuum* does frequently perform such extraordinary and surprizing Wonders, may likewise in this case force up the *Sap* (which was stop'd in its Ascent either by that ligature or stripping off the *Bark*) through the very substance or *Fibres* of the *Wood*, in order to its Nourishing the upper parts of the Tree, which must Infallibly have perished without a seasonable Supply.

Lastly, I say it may be Answer'd with very good Reason, that this Distension or Tumor of such tyed Branches in their breadth, and accretion to their length, may be Stiled rather a kind of Dropfie, than a real and firm Augmentation of their found substance and continuity; for Experience tells us, That in Trees thus tyed or stripp'd, the upper parts of the Tree come to dye in a very little time, as they must needs do if the Channel be not open'd again to give a free passage to the true Nourishment of the Tree.

Now to give some other Instances, to confirm our Opinion, we may consider that those Plants whose *Roots* lye very deep in the Ground, as *Tulip-bulbs*, &c. do always grow up to the greatest height.

As also we may observe the *Pointed* and *Pyramidal* Extremity of all Branches; every one of which seem in the manner of their Growing, as with one consent, Naturally to tend upward.

To which we may add, as another Corroborating Circumstance, the *shoot*ing out of new Sprouts, upon the Back or Elbow of such Branches as are bent violently, or by force, to the Ground; the *Suckers* that grow out of the foot of the Tree when it has been injured at the top: the decay of the Branches at the Extremities notwithstanding their being still vigorous at the *Root*, as also the Withering and Fading of Plants at the top of their Leaves in hot Weather when they are newly Set: All these Instances seem to me evidently Contradictory of any descent of the *Sap* which they suppose to be caus'd by the Influence of the Air, either upon the *Bark* of the Tree, or the Extremity of the Branches.

The different Tastes in Fruits which always have a smack of their Soil, are a sufficient proof that their Nourishment is derived from a Soil of such a Savour, and not from the Air, which has none at all; and certainly if any of the *Sap* could find a passage across, or through the solid *Wood*, it might as well enter in the same manner through the Skin of the Fruit; and so the Stalk, which by a long Prescription has hitherto been look'd upon as the true and only Channel for Conveyance of the Aliment to the Fruit, would have a great many Partners in that Office, and consequently become in a manner wholly useless.

I will not deny but that it is highly necessary for Trees to enjoy the benefit of a temperate Air, whereby the *Bark* may be rendered the more pliable and easie to be

be dilated and loos'd from its inclosed *Trunk*, to give the freer passage for the *Sap* in its rising up from the *Root*. Indeed, I can never be persuaded to think that any Nourishment can be conveyed through that *Rind*, but am of Opinion rather, that a Tree depriv'd of all its Top Branches, in a very hot Region; as for instance, we may suppose a Row of Trees cut even at the Tops, and Planted in a Hedge to the South under the *Torrid Zone*, would be so far from drawing in any Nourishment through the *Bole*, that even the *Sap* would be so much hindred by the heat of the Air from ascending by its ordinary passage, as that the upper part of the Tree would Infallibly perish; whence it would follow, that the *Sap* being made unable to rise up to the small upper Boughs, would burst out at the foot into an infinite number of new and small Productions.

As for those who from the Experiment of making an Incision into a Tree, pretend to prove this Intromission of *Sap* into the upper part, or to defend the Circulation of the *Sap* from that Liquor which will run plentifully out of such an Incision, in my Opinion they build their Hypothesis upon a very Sandy Foundation.

For, First, If we either cut or break off the Top of any Plant, the *Sap* will be seen plainly to gush out in great abundance from each of the two Extremities bubbling out of every *Pore*, as well in that part which retain'd its Situation, as in the other which was separated from the former.

Secondly, If the Incision be made at the bottom, there will run out not only some part of that *Sap* which is continually ascending, but also a little of that which being already upon its rise, and having till then been supported by the succeeding *Sap*, must of necessity fall down when destitute of that Support and Foundation of which it was depriv'd by that Incision.

To conclude, If this Incision were a sufficient proof of this Assertion, it must follow that all the uppermost *Sap* must make its way out at one single hole, as we see the Water in a Vessel runs all out at any hole it meets with: But Experience tells us, That how many Incisions soever you make, either above or below the first, the *Sap* will issue through all of them, but most abundantly through the lowest, and in least quantity through the highest, which certainly must proceed from the Reason which I have given before.

## C H A P. XX.

*Reflections upon the undistinguishable likeness of the Sap in the Wood, Leaves, and Fruit.*

There is hardly any Plant growing with us, during the whole Summer, puts out more *Roots*, and consequently produces greater plenty of *Sap*, than the *Fig-Tree* does; so that we may venture to build our Observations concerning *Sap* in general, upon such Remarks as a particular Enquiry into the Nature of this Tree will afford us: The *Sap* whereof appears to me to have exactly the same Colour, Taste, and Consistence both in the *Wood* of the Tree, and the *Stalk* both of the *Leaves* and *Fruit*, that it has in the *Fruit* it self, whilst it is yet Green; for when it comes to be Ripe and fit for Gathering, there is not the least sign to be perceived of that white *Sap* with which it was so plentifully impregnated before it was come to Maturity.

From hence we may very well advance this general conclusion, That there can be no material difference between that *Sap* which goes to the forming of the Fruit, and that which enters into the Composition of all the other parts of the Tree, since there is so great a Conformity between them at the time of its passing out of the Stalk into the Fruit. So that admitting the *Sap* for Fruit to be endued with some particular degrees of Perfection beyond what are to be found in the *Sap* of the Tree, yet what do they think becomes of it, when the Fruit which it was design'd to have form'd and nourish'd, chances to perish, as oftentimes it doth, even in the *Embryo*, or at least before it comes to Perfection? In this case it must certainly be mixed with the rest of the *Sap*, and be equally employ'd with it in the Production of something that is not Fruit.

And this will suggest the Reason to us why Trees without Fruit abound more in Wood than those that bear Fruit plentifully; which according to the Opinion I ever had, is nothing else but the different proportions of the *Sap*; the smaller quantity

tity whereof causes plenty of Blossoms and Fruits, as the greater quantity produces the like Encrease both in the Body and Leaves.

To this may be added, what I have already repeated so often, *viz.* That the Fruit grows at the Top of the weak Branches, but at the Bottom of the strong; whence it appears, that no part of the Branch is exempted from bearing, and that they are under a very great mistake, who, while they pretend to render an account why the weak Branches are generally most loaded with Fruit, and particularly towards the Extremities, put us off with this Reason, That it is for the better concocting and refining of the *Sap*, which (say they) can be effected no other way than by so long a Passage and Percolation through the narrow Conveyances.

But suppose this Fancy had some probability of Reason in it, how shall we explain the Production of *Grapes*, *Quinces*, *Mulberries*, *Azerolles*, *Rasberries*, &c. which receive their Formation at the same time that the Wood does upon which they grow: For Example: There grows upon every old Branch of a *Vine* that used to be Pruned in the Spring, as many new Branches as there were Eyes left upon it. Upon these Branches, and at the very same time with them are the *Grapes* formed, which ordinarily do not grow nearer to the end than the third, fourth, or fifth Knot, for from that distance the Branch runs up only in length, without bearing any Fruit.

This being granted, which indeed cannot be denied, I would ask them what Ground they have to assert, That the *Sap* is not sufficiently prepared till it arrive at one of these three Eyes, and there receive its perfect Digestion: for they divide the *Sap* into two sorts, *viz.* Digested, and Indigested; the former they tell us is employed both in forming the *Grapes* in some one of those three Knots, and in Production of the Leaves and Branches; and yet there is always some Wood, Pulp, and Husk of the *Grape* between every one of these Knots, to the Formation of which both these *Saps* did contribute.

Lastly, After this Secretion of the Digested *Sap* from the Indigested, they come both of them to be re-united in order to the Production of Boughs and Leaves only, for the remaining part of the Year. I must confess ingenuously, I am not quick enough to penetrate into, and comprehend these so subtle and refined Notions of our modern Philosophers.

## CHAP. XXI.

*Reflections upon the Opinion of those, who from the Generation of Animals Argue concerning the Production of Fruits.*

There are some, as I have formerly observed in my *Treatise of Pruning*, who Treat of the Production of *Fruits*, proceed the same way they do in their Considerations about the Generation of *Animals*. *Animals* (say they) *do not Procreate their Like, but when they are in their Vigor, Generation being an Act of Vigor in all Natural Productions.* Now since *Trees* are also Natural Beings, 'twill hence follow, that they are never Capable of bearing Fruit, but when they are in their full Strength and Vigour, it being absurd to make the Production of Fruit a sign of the Weakness of the Tree. And they further add. *That in all the Works of Nature, the Cause is known by the Effects, and every Extraordinary Effect must be produced by a suitable Strength and Vigour in its Agent.*

These indeed are very plausible Arguments and Inferences, and which, when mentioned by Persons of Reputation, may prevail with such as do not see into the Weakness of them.

But though I highly Esteem the Persons, and the Works of those Ingenious Men, who Argue after this manner; yet, when to expose my Notions, they make me Advance such a one as this: "That the abundance of Moisture which makes the *Trees* produce a great quantity of Branches and Leaves, is an Effect of their Vigour; they must give me leave to say something in my own Defence. I might well say, and now I say it again, That *Blossoms* and *Fruits* on *Trees* are signs of their Weakness, or, that they have but little *Sap*; as on the contrary, a great number of fair Branches without Fruit, is of the Vigour, or of the abounding quantity of their *Sap*. For I do not think that the word *Moisture* does properly signify the *Sap* in a Tree, and therefore should not be understood in that Assertion of mine for any thing else, but the *moisture* of the *Earth* where a Tree is planted; there being so great a difference

a Difference between it and *Sap*. And we seldom see any very great Quantity of *Sap* in such Fruit-Trees as have very much Moisture about their Roots. Nay, We sometimes see them die, by having their Roots too much drenched in Water; and they will never take well in very wet Ground; whereas, for the most part, they afford both much *Lop-wood* and Fruit, if they have naturally a Vigorous vital Principle, and are planted in a good Earth, indifferently moisten'd, and do thereupon send forth good Roots to furnish the upper Parts with a sufficient Quantity of *Sap*.

These Terms therefore of *Moisture* and *Sap*, are not to be promiscuously used, the one being to be understood only for that Nourishment which is in the Tree, and the other for such Water as may be about the Root of it.

That which has given Occasion for Mens arguing upon the Production of Plants, after the same manner they do upon the Generation of Animals, has been this, as I conceive, that they imagin'd the Fruit to be the same, in respect to the Tree, that the young Animal is to its Syre that begat it; and would thence conclude, that as Lyon's Whelp'd, for Instance, exactly resembles its Syre in all its Essentials, so a Pear, or a Cherry must, in its Formation, that of its Tree, seeing that in time it may grow up to be as tall and big, and every way like it, just as the young Lyon does at length equal the Old One, both in Largeness and Proportion of Parts.

Now Nature it self plainly shews us, that it does not act the same way in both these Cases; and that the most that can be gather'd from such Considerations, is, that one Part of the Fruit of each sort of Trees, is the same with respect to its Tree, that the Seed of the Animals is to its respective Animal.

I am not so well skill'd in Anatomy, as to know, whether the Seminal Matter in Animals require as much Force and Vigor to be formed in the Body, as it afterwards does in being duly employ'd in order to Generation: But sure I am that no Man ever distinctly perceiv'd in himself, either the Time or Manner of its Formation, any more than he did those Circumstances of the Formation of his Muscles, Bones, or Cartilages: and that 'tis certainly a Provision in Nature, that of the whole Mass of Nourishment, one Part should go to the making of Seed, and the rest should be employed either to the Encrease, or the Preservation of the Animal, without ever making any sensible Effort, either in Framing, or perfecting any of the Internal Parts of the Body.

And besides, he will find himself mightily mistaken, that shall lay down this as a standing Rule, that every kind of Fruit is in the Nature of a Case to such a Seed as is capable of producing the same sort of Tree with that it self grew upon. The most ordinary way of Multiplying Trees, being not by their Fruits. And indeed who ever saw a *Prunier de Perdrigon*, or a *Bigarotier* grow from the Stones of the Fruit? a *Fig*, or *Mulberry-Tree* from the Seed, a *Bon-Chretien*, or *Bergamotte* from the Kernels of such Pears? Though I know 'tis common for an Oak to come of an *Acorn*, and a *Chestnut-Tree* of its Nuts, and some others to be produc'd in the same way; yet Nature has provided other ways of multiplying them, *viz.* by young Shoots growing out at the Roots, and several sorts of Grafts. Some of those ways which Nature makes use of in preserving the several Kinds of Trees, I have already treated of in another Place: And now I come positively to affirm,

That if a Man first lays down such a Maxim as this, that the only Reason why some Fir-Trees thrive well, is, because they grow on the South side of a Mountain; And that others do not, because they stand on the North Side of it: And thence draw Inferences, and apply them to Fruit-Trees, such Arguments must necessarily be very weak, for these two sorts of Trees are subjects very different, and therefore should be as differently considered.

For what is chiefly to be considered in Fruit-Trees, is scarcely at all taken notice of in Firs. In these latter, we are only to compare one Part with another; that is, barely to consider the whole Bulk and Extent of the Tree, to see whether it be good for Masts, Planks, Beams, or Joists. But in the other, all the Branches are to be carefully considered, both the Great and Small, which may be of use, and which not. In these we observe the Working of Nature, in Distributing the *Sap* to every single Part of the Tree. But in the other, only to what particular Use it may be put in the Building of a Ship. Nature is not concern'd whether such a particular Fir-Tree be fit for Boards, and whether, or no, it be put to that Use; whereas it may not be improperly said, that she is highly concerned in the Productions of Fruit-Trees, which are to be the Food of the noblest Part of the Creation. And yet of all that is performed in the whole Course of Vegetation, these Fruits

coft Nature the leaft pains in making, and the Philofopher the moft in undertaking them.

And the more to puzzle and confound the Curious Enquirers in the Works of Nature, it proceeds in the Formation and Nourifhment of Trees in a way quite different from that wherein perfect Animals are Generated and Preserved; As if it thereby designed to prevent the drawing of any manner of Confequences from the one, whereby to underftand or illuftrate the other.

The Diftribution of Nourifhment in perfect Animals is made in equal Proportions to each of the Members, which exactly answer one another; fo that the Right Arm or Thigh usually receives no more than the Left; and fo of the reft: Whereas in Fruit-Trees the Sap is diftributed in very unequal Meafures; few of the Branches being perfectly of the fame bignefs, but fome very large, others very fmall, and a third fort of a middle fize between both; and confequently requiring a proportionable Quantity of Sap.

It alfo fometimes happens that fome of the fmall Branches receiving more Sap than that particular ufe for which they feem'd to be designed, did require, grow in a fhort time to an extraordinary bignefs; and on the contrary, others that at firft feem'd large ones, receiving a lefs Quantity of Sap than was neceffary, never grow much bigger than thofe of the fmall fize.

And this may not unfily be illuftrated by thofe Alterations we frequently obferve in fome Rivers, where the Main Stream does not always go in the very fame place: Sometimes you'll fee it bear ftrongly upon one Bank, and within a few Months after, quite removed to the oppofite fide, or elfe fettle in the midft between both. Only 'tis to be obferved, that whether fide foever it takes to, it commonly makes no very long continuance there.

For after the very fame manner, we frequently fee ftrange Alterations in the Motion of the Sap in the Boughs, which are properly its Channel, and where it never conftantly keeps the fame courfe it firft took. One Year it flows in to great a quantity into one of the fmall Boughs, which was juft upon bearing, that it quite alters its Difpofition, and puts it upon lengthening and enlarging it felf; that Matter which otherwife would have been Fruit, affuming the Nature of, and turning into Wood.

The next Year it may happen, that what formerly was employ'd in enlarging the Boughs, now changes its Office, and feeds them chiefly in order to the bearing of Fruit.

Another Year you fhall fee a Branch, which at firft look'd as if it would have grown into a Maffive Bough, begin all on a fudden to bear; the Channel through which the Sap paffed before in a great quantity, being fome way altered, and thereby the Branch hinder'd from growing any bigger than thofe of the leffer fize.

And 'tis further obfervable, that Nature has for each kind of perfect Animals its own peculiar Mould, wherein they are all as it were caft exactly into the very fame fhape, and have fuch an Air as makes them very nearly refemble each other; whereas in the Designing and Forming of Fruit-Trees, it neither obferves Proportion of Parts, nor Equality in Bignefs, nor Refemblance in Shape. In perfect Animals, the Eyes and the Ears, the Belly and the Feet, &c. are always orderly placed in the fame Parts of the Body: And none of thefe is ever fuffered to grow in a wrong place, but when fome frightful Monfter is to be produced: Whereas the Care of Nature is no further concerned about Fruit-Trees, but only that they fend forth large Boughs, and yield good Fruit, whether it be on the top or below, on one fide or the other: Nay, it feems willing fo far to comply with the Ingenious Gardiner, as to obferve his Orders and Conduct in the Management of Trees, fuffering them to receive what fhape he fhall appoint them, and even to produce what Branches and Fruit he will, and where he pleafes.

Now fince many Productions may be in a Tree at the fame time, and there is no one Exteriour part of it which is not capable of producing, whereas this Work of Nature is only performed in one certain part of Animals; How unreafonable is it to argue in all things concerning the Production of Trees, from the Generation of Animals?

There is a certain Courfe of Action in the Sap, which very few have the Curiofity nicely to obferve; and fome are fo wholly taken up with Studies of a higher and more delightful Nature, or with Bufinefs of greater Importance, that they cannot fufficiently apply themfelves to fuch Obfervations. And though it would be a very great

great Accomplifhment in any Perfon that has attained to fome confiderable Perfection in two or three Sciences, if it were poffible for him to make himfelf as much Mafter of all the reft; Yet a Man may properly be faid to be a Good Aftronomer, a Geometrician, or Archited, though he be not perfectly well Skill'd in all the other Arts and Sciences. And it would be an unjuft Cenfure, to fay, That fuch a Man is no Good Archited, becaufe he is not alfo a Good Gardiner. For though an Architeds Skill in Building might juftly be fufpected, who fhould make a Houfe with fmoaking Chimneys, or Rooms that would not hold a Bed; Yet, 'twould be hard to Queftion the fame Man's Abilities in Architecture, becaufe the Trees in his Orchard were not all well Ordered, or did not bear abundance of Good and Fair Fruit.

And fpeaking with Reference to a Gardiner, there are a great many Parts of curious Knowledge which he has no Ufe of in his way, and would not in the leaft contribute to the Advancement of his Skill or Art. As for inftance, When one knows that the Marble of fuch a Mountain at *Genova*, or the Stone of *Carriere de St. Leu* are very good and fine, either to Build with, or to make Statues of; whereas thofe of other Places are much Courfer, and lefs fit for fuch Ufes: Pray, Why fhould a Man break his Brain to find out the Reafons of the Excellency of the one, the Imperfections of the other, fince he can neither Correct the one, nor make the other laft for ever? All that is neceffary in this Cafe, is, To know where to find the beft, when he fhall have occafion to make ufe of it; and where the bad is, that he may not meddle with it.

In *Italy*, the Firrs that grow on the South-fide of a Mountain are much better than thofe that grow on the North fide of it. This many of us know upon our own Experience. But I believe a Man would find himfelf mightily miftaken, if without any regard to the difference of the Earth, he fhould thence conclude, that the only Reafon why the latter are Bad, is becaufe they grew up expofed to the North: For all our Modern Mariners agree, That the beft Firrs for Mafts come from the moft Northern Parts of *Norway*; Or if on the contrary, he fhould lay down this as the only Reafon why Firrs that ftand expofed to the South, are the Beft; namely, Becaufe nothing elfe but the exceffive Heat of the Sun can comprefs the Parts of that matter wherewith they are Nourifhed, and confequently harden and ftrengthen the Fibres of fuch Trees more than of thofe that are not fo direftly expofed to its Influence: How will this way of Arguing hold concerning fuch Firrs as are almoft continually in a Frozen Condition? Pray, Is not Cold as apt to clofe, and harden, and ftrengthen any thing as Heat? And is it not as ufual for Rains to come from the South, as from the North? And confequently are not fuch things as are lie to the South, as liable to be kept moift, as thofe that lie towards the North?

From all which it appears, how unfafe it is, in Treating of Vegetation, to goup on General Confeiderations; And that it is much better to examine Particulars; And that not barely with a Design to Feed and Gratify a vain and ufelefs Curiofity, but efpecially to difcover fomething that may be of real Ufe and Benefit to the Artift in the way of his Profeflion. We fhall therefore take little or no notice of fuch Notions, as being but barely probable, are not fufficient to advance any general Maxime upon; and keep our felves from paying too great a deference to the Authority, and being Prepoffeffed with all the Opinions of Perfons, who, not contenting themfelves to know, and to be juftly efteemed for their Skill in fome Things, take upon them to lay down Rules in others they do not fo well underftand.

Every Body knows that Trees that grow in an open Plain, and in a dry Earth, yield more *Top-Wood* than fuch as grow in a Foreft, and in a moift Ground. But I believe it matters not much whether fuch Trees as grow in a Plain be more expofed to the South, or to the North; Such Pofitions being in fome Countries not at all taken notice of. And this is evident, particularly in the Vines of *Verfenay*, which are much better when they are expofed to the North, then to the South, notwithstanding that \* General Maxim of the Ancients to the contrary.—Now he that taking thefe Words in their ftrict Literal Senfe for an Univerfal Maxim, fhould go about to Maintain and Propagate it by Reafons and Arguments, would find many Difsenters from this Opinion of his and the Ancients.

How

*Aufus vult  
fibi objectas  
bilitat, Aquilo  
fecundat, Elige  
plur cedis quam  
melina. Crifen-  
tius Paladius.*

How Necessary soever the Heat and Influences of the *Sun* may be in themselves, and how advantageously soever any Plant may be expos'd to it, yet if it have not the Benefit of a good Earth, as well as the Prospect of the Mid-day, or Afternoon Sun, we very seldom see that its Productions are any way Extraordinary. Hence comes that vast Difference we see in *Pines*, that have all exactly the same Position towards the Sun: And hence also it comes that we have so much Marsh Ground that is wholly Useless, so many Plains that are Rich and Fruitful even without Tillage, and so many Mountains that produce nothing at all. If the *Pipes* of an *Organ*, or any other Instrument, be not good and well made, to what purpose is it to put them into the most Skillful Musicians Hand? Are not all Mens Souls of the same Immaterial Substance, and equally Perfect in themselves? To what therefore shall we ascribe that Wonderful Difference we find between the Abilities of Wise Ministers of State, or Great Philosophers, and the others who are so Dull and Rude, that they are capable neither of Ingenious Arts, nor Common Civility, but to the Difference of their Temper, and of the Organs of their Body?

'Tis most certain therefore, that the Good or Bad Disposition of the *Earth* is chiefly to be look'd upon as the Principal Cause of whatsoever Difference we find in its Productions.—And in order to the several uses they are to be put to, all that is necessary to be here further observed, is, That such Trees as grow in large and thick Forests are much taller, and their Timber straighter than those that grow in thin Woods or Thickets.—The Reason whereof may be this, That every Tree having a kind of Natural Desire to Enjoy the Benefit of the *Sun*, and as it were Fearing to be stifled by the closeness and over-topping of those next it, endeavours to raise its Head so high as to reach the free and open Air: And all of them having, if I may so call it, this Natural Instinct, each endeavours to over-top the rest; and so all of them grow to a much greater height than those that stand alone: And if such a Forest happen to be very thick, the Trees growing up too hastily to an excessive height, have not a proportionable Bulk, whereas such as grow up more at liberty, having no such Necessity of growing high on a sudden, make the best advantage of their Nourishment, grow up leisurely, and with a thickness answerable to their height.

And this may be sufficient to satisfy our Curiosity, as well as to Direct the Artist what sort of Trees may be fit, and which not, for his several purposes in Building.

## CHAP. XXII.

*Reflections upon the Influences of the Moon in its Wain and Full, &c.*

I Shall now, in the last place, consider those Superstitious Observations our Modern *Gard'ners* make upon the Influences of the *Moon* in its Wain and Full.

I know they will take it ill, that I should look upon that as a piece of Superstition, nay as downright Folly, which they pretend to have been the constant Observation and Practice of all Times, and in all Parts of the World.—They will tell you that, according to the Opinion of the Ancients, every Friday the *Moon* is in a kind of Wain; and that above all the rest, Good Friday is to be made choice of for Sowing all manner of Seeds; inasmuch that Sowing upon that day such whole Fruit you would have to be early Ripe, they will persuade you that they will be Ripe exactly at the time you expect, such for Instance, as *Melons*, *Cucumbers*, *Pease*, &c.—As also that those you would not have to come so soon to their Maturity, will as exactly Answer your Expectation, namely all sorts of *Pot-Herbs*, *Coleworts*, *Lettuces*, *Onions*, &c. And all this doubtless out of a profound Respect they bear to the day whereon they were set. And that such as are set in any other time of the *Moon* do quite fail the *Gard'ners* Expectations.

This they will not be convinced to be a gross Delusion, as are also several others which they have received by a kind of Tradition from the Ancients, namely such as these, That neither *Plants*, nor *Graffs*, nor *Lopped Trees*, will be quick in Bearing, unless they be set, or cut in the Wain of the *Moon*. And that so many days as any of these is done after the Full, so many years the sooner will the Trees come to their Perfection in Bearing.

And they positively Assert, That the only Reason why some Trees are so long before they Bear, is because they were either Set, or Cut, or Graffed while the *Moon* was either in the Encrease, or at the Full.—This they contend for as a matter

matter of Universal Experience, and beyond all manner of Dispute, notwithstanding all that can be said, or shewn to the contrary.

But for my part, I think there is nothing more Ridiculous, whether we consider the Things themselves they contend for, or their way of Proving what they Assert.

As to the Things themselves, I profess that I have for above 30 years, observed with all the exactness imaginable, whether the several Phases of the *Moon* have such different Influences upon *Gardening*, to the end I might follow an Opinion so Universally received, if it should prove true: And that after all, I find that all this is no more than the Old Sayings of some Unexperienced and Ignorant *Gard'ners*, who designed thereby to cover their own Ignorance, and hoped to be remember'd for such *Forgery* among such as knew nothing at all of Husbandry.

I should be the Boldest, and most Insolent Man in the World, if I should Decry, or go about to Disprove a Maxim that has obtained for so many Ages, and is mentioned by so many Persons so strongly perswaded of its Truth, and so Zealous in the Defence of it, if I had not the Authority of a long Experience free from all manner of Prejudice, to confirm what I advance against it.

'Tis true indeed, I have plac'd the Critick in all the several Parts of *Gardening*; and laying aside the Authority of Authors, and Modern Practice, I have expos'd the Errors of the one, and the Faults of the other: All which I have done with no other Design but only to Confirm and Improve what I found to be Good, and to Undeceive the World in what upon Experience proved to be otherwise.

And among these latter I may justly reckon this Superstitious Observation of the *Moon's* Wain; for in what Quarter of the *Moon* soever you Set your *Graffs*, provided you do it well, and at such times of the Year as are proper for such or such *Graffs*; and upon such Trees as Suit with the *Graffs* you set upon them, that the Stock be good, and rightly Qualified, that it neither send up too much, nor too little Sap; and that the *Graff* be neither too strong, nor too weak, your Experiment will, if not always, yet for the most part, have the same Success: Or if the *Graff* happen to fail, you will have no occasion to blame your self for it.

In like manner, Sow or Set any sort of Seeds or Plants, in all the several Quarters of the *Moon*, and I will promise you the same Success in all, provided your Earth be good and well prepared; that there be no Fault in your Seeds or Plants, and that the Season be favourable: And that the first day of the *Moon* will be altogether as good for that purpose as the last.

Having thus consider'd the thing it self, we may, in the last place, look into the Absurdity of it: For indeed, how it is possible that one and the same Influence of the *Moon* in one particular Position, should at the same time affect Plants after such a different manner, and produce in them quite contrary Effects.—'T would be a rare Secret indeed, if the *Moon* should hold an Intelligence with the *Gard'ner*, causing some of his Plants to Spring up apace, and hindering the Growth of others, just as he would have them.—Nothing certainly would be of greater Advantage in the way of *Gardening* than this, if it were True; but since nothing is more repugnant either to Reason or Experience; and that I hope Men will grow Wiser than to Trouble themselves any longer about it, I shall spare my self the Pains of exposing it any further.

F I N I S.

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